REPORTS

OF THE

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

VOLUME VII.

Session of 1906–1907.

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Hon. Secretaries:

LONDON:

FRANCIS JAFFREY. J. PORTER PARKINSON, M.D.

PROVINCIAL:

HENRY SKELDING, B.C. (Bedford).

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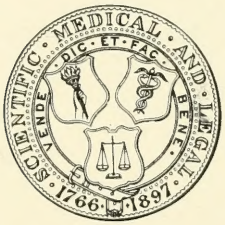

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ELECTED AT THE ANNUAL GENERAL MEETING.

Council (1907-1908).

Those marked thus (*) served on the Council or held office during last session, 1906–7; (†) Chairman of Council; (††) Past Chairman of Council.

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LONDON:

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PROVINCIAL:

J. G. EMANUEL, M.D. (Birmingham).

LIST OF OFFICE-BEARERS SINCE THE FORMATION OF THE SOCIETY IN THE YEAR 1900-1901.

Dates.	Chairmen of Council.	Honorary Secretaries.		Honorary Treasurer.	Editor of the 'Reports.'
		London.	Provincial.		
1900–1	A. E. Sansom, M.D.	Sydney Stephenson, C.M.	Charles H. Willey, C.M. (Sheffield).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1901–2	A. E. Sansom, M.D.	Sydney Stephenson, C.M. George Carpenter, M.D.	Theodore Fisher, M.D. (Bristol).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1902–3	A. H. Tubby, M.S.	Sydney Stephenson, C.M. George Carpenter, M.D.	Theodore Fisher, M.D. (Bristol).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1903–4	Sydney Stephenson, C.M.	George Carpenter, M.D. G. A. Sutherland, M.D.	Theodore Fisher, M.D. (Bristol).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1904–5	Sydney Stephenson, C.M.	G. A. Sutherland, M.D. Edmund Cautley, M.D.	R. H. A. Whitelocke, C.M. (Oxford).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1905–6	R. Clement Lucas, B.S.	Edmund Cautley, M.D. Francis Jaffrey.	R. H. A. Whitelocke, C.M. (Oxford).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1906–7	R. Clement Lucas, B.S.	Francis Jaffrey. J. P. Parkinson, M.D.	Henry Skelding, B.C. (Bedford).	R. Clement Lucas, B.S.	George Carpenter, M.D.
1907–8	George Carpenter, M.D.	J. P. Parkinson, M.D. Hugh Lett, Ch.B.	J. G. Emanuel, M.D. (Birmingham).	R. Clement Lucas, B.S.	George Carpenter, M.D.

RULES.

Name.

1. The name of the Society shall be "The Society for the Study of Disease in Children."

Object of the Society.

2. The object of the Society shall be the study of disease and of allied subjects in children.

Constitution.

3. The Society shall consist of Ordinary, Temporary, and Honorary Members.

Qualification for Membership.

4. All duly registered medical men shall be eligible for membership.

Officers.

5. The officers of the Society shall be elected from the ordinary members, and shall include an Honorary Treasurer, an Honorary Editor of 'Reports,' Honorary Secretaries (one of whom shall be resident in the London postal district, and one in some other part of Great Britain or Ireland), and twenty-four other members, of whom at least one third shall not be resident in the London postal district. These together shall constitute the Council and manage the affairs of the Society.

Ordinary Members.

6. The names of candidates shall be proposed upon a printed form provided for the purpose, and signed by two or more members from personal knowledge. The names of candidates shall in the first instance be submitted to the Council, in which shall be vested the absolute power of declining to allow the

nomination to proceed. The proposal paper, after approval by the Council, shall be read at an Ordinary Meeting of the Society; and the ballot shall take place at the next meeting. No election shall be valid unless at least ten members vote, and no candidate shall be elected who fails to obtain four fifths of the votes recorded. No rejected candidate shall be eligible for proposal until twelve months have elapsed.

Form of Admission.

7. Every Ordinary Member, after his election, and after payment of the annual subscription, and of the entrance fee (if any), shall sign the roll of members, declaring thereby his adhesion to the Rules of the Society.

Temporary Members.

8. Any resident medical officer of a hospital or infirmary shall be eligible for election by the Council as a Temporary Member of the Society for a period of twelve months, without payment of any subscription or entrance fee. He shall be entitled to attend the ordinary Meetings, but he shall not have a vote, shall not be eligible for office, shall not be entitled to receive a copy of the 'Reports,' and shall not introduce visitors. If, at the termination of the period for which he has been elected a Temporary Member, he desires to become an Ordinary Member of the Society, he must go through the usual form of election, but shall be exempt from paying any entrance fee.

Honorary Members.

9. The Council shall have power to propose for election as Honorary Members the names of persons eminent in medicine, surgery, or the collateral sciences. The Honorary Members, who shall not exceed twelve in number, shall be balloted for, after proposal by the Council, at a General Meeting of the Society, and be subject to the same rules as govern the election of ordinary members. They shall enjoy all the privileges of ordinary members, voting excepted. They shall not be called upon to pay any fee or subscription.

Resignation and Expulsion of Members.

10. Any member may retire from the Society on giving written notice of the intention to do so to one of the Secretaries and on paying any contributions that may be due.

The name of any member may be expunged from the Society's roll only at a General Meeting convened by the Council specially

for consideration of the case. At least ten votes must be recorded, and four fifths of the votes, if recorded in favour of the expulsion, shall be decisive. Any person expelled in accordance with this rule shall forfeit all claim upon the Society.

Subscriptions.

11. The annual subscription for Ordinary Members shall be One Guinea, payable in advance at the beginning of the session in October. Ordinary Members elected after July the 31st, 1901, shall pay an entrance fee of One Guinea; but in the case of any member elected subsequently to Easter in any year the member shall not be called upon to pay a subscription during the ensuing session. Original Members pay no entrance fee. A member shall at any time be exempted from further annual subscriptions by paying a composition fee of Ten Guineas.

A member whose subscription is six months in arrear shall be reminded of the fact by one of the Honorary Secretaries; and if the amount due remain unpaid during the current year, his name may be removed by the Council from the list of members.

Election of Officers.

12. The Officers of the Society shall be elected by ballot at the Annual Meeting. No member, except the Honorary Treasurer and the Honorary Editor of the 'Reports,' may hold the same office for a longer period than three consecutive years. A list of names recommended by the Council for election shall be sent to each ordinary member at least fourteen days before the Annual Meeting of the Society. A name or names may be substituted on the voting paper for that of any member or members proposed by the Council for election. Two Scrutineers shall be appointed by the Chairman at the commencement of the Annual Meeting, and their duty shall be to receive and examine the balloting lists, and report the results to the meeting. In the case of equal voting the Chairman shall decide by lot.

Honorary Treasurer.

13. The Honorary Treasurer shall have charge of the funds of the Society, and keep an account in an orderly and business-like way of all sums that pass through his hands. He shall receive all moneys due to, and pay all moneys due from, the Society, only after the accounts have been passed by the Council and signed by two of the members present. He shall keep a printed receipt-book for subscriptions and fees, and every receipt shall be signed by him and countersigned by one

of the Honorary Secretaries. He shall prepare an annual statement of accounts, which shall be audited by two ordinary members of the Society not in office, and presented, with the Council's Report, to the next Annual Meeting. He shall keep a separate banking account in the name of the Society, and shall invest the funds from time to time as directed by the Council. The Honorary Treasurer shall be *ex officio* a member of Council.

Honorary Editor of 'Reports.'

13A. The Honorary Editor of the 'Reports' shall edit the Society's 'Reports' and he shall keep all papers and communications and illustrations intended for publication in the 'Reports.' He shall be *ex-officio* a member of the Council.

Honorary Secretaries.

14. The Honorary Secretaries (or one of them) shall conduct all correspondence, notify to new members their election, and convene, attend, and minute all meetings of the Society, of the Council, and of any committees appointed by the Council. They shall arrange the order of proceedings at all meetings. They shall submit to the Council all official communications and all nominations for membership in the Society. They shall keep a register of all cases and papers communicated to the Society. They shall keep a roll of the officers and members of the Society. In the discharge of these various duties the Secretaries shall have power to employ clerical assistance, to use printed or typed forms, and to prepay postages and telegrams. They shall be *ex officio* members of Council.

Meetings.

15. These shall be *Ordinary, Special,* and *General.*

Ordinary Meetings shall be held at hospitals in London or elsewhere, or in places appointed by the Council. There shall not be more than eight Ordinary Meetings in the year, and of these one at least shall be held elsewhere than in London. The meetings shall take place upon the third Friday in the months of October, November, January, February, March, April, May, and June, at 5.30 p.m., unless otherwise arranged by the Council. They shall not be of longer duration than two hours, except by special resolution of the Meeting. Clinical and Pathological Demonstrations, and discussions thereon, shall take precedence over papers. Nothing relating to the laws or the management of the Society shall be discussed at an Ordinary Meeting.

Special Meetings may be convened by the Council for the purpose of discussing a subject or subjects deemed to be of

particular interest in relation to disease in children, or to allied subjects.

A *General Meeting* shall be called by the Honorary Secretaries on the requisition of any five members of Council or of any twenty ordinary members of the Society. At least fourteen days' notice shall be given to every ordinary member of the Society; and the character of the business to be transacted at such meeting shall be stated on the summons paper. No business other than that set forth upon the summons paper shall be considered at the meeting.

The *Annual General Meeting* shall be held at a time and in a place determined by the Council, fourteen days' notice having been given to every ordinary member of the Society. Its business shall include election of officers, presentation of the annual Report of the Council, and the discussion of any proposed alteration or alterations in the rules (notice of which shall be given in the summons convening the meeting). Ten ordinary members shall form a quorum. No change in the rules shall be valid unless three fourths of the votes are recorded in favour of the alteration. A notice, written or printed, may be served upon any member, either personally or by sending it through the post in a prepaid letter, addressed to such member at his registered address.

Chairman.

16. A Chairman, who must be an ordinary member of the Society, shall be chosen by show of hands or by ballot at the commencement of each meeting, whether ordinary, special, or general. He shall sign the minutes of the preceding meeting or meetings, regulate the proceedings, check irregularities, interpret the application of the laws, and enforce the recognised rules of debate. The Chairman shall have an ordinary and a casting vote.

Publications.

17. Reports shall be published in such manner and at such times as the Council may direct. A copy shall be forwarded free to every Honorary Member of the Society, and to every ordinary member whose subscription is not in arrear.

Visitors.

18. An ordinary member may introduce two medical men as visitors at ordinary meetings of the Society. Visitors shall sign their names in the book provided for the purpose. On the invitation of the Chairman, visitors shall be permitted to take

part in the discussions of the Society. The same visitor shall not be introduced more than twice during one session.

Council.

19. The Council shall have the management of the affairs of the Society, and shall meet as often as may be necessary for the transaction of business. Seven days' notice of each meeting shall be sent by the Honorary Secretaries to every member of Council. Five members shall form a quorum. The Council shall determine questions, if necessary, by ballot. The Council, at its first meeting, shall elect from amongst its members a Chairman, to preside over its deliberations during the session. He shall not hold office for longer than two consecutive years. In his absence the chair shall be taken by some other member of Council, duly proposed and seconded. The Chairman of Council shall have a casting, in addition to an ordinary vote. The Council shall from time to time make regulations, issue instructions, appoint committees, and take any other lawful steps to further the good government of the Society. It shall prepare and present to the Annual Meeting a Report upon the state of the Society. The Council shall be empowered to fill all vacancies that may occur from death or otherwise between one Annual Meeting and another. It shall decide all questions relating to the publication of the 'Reports.' It shall annually depute three of its members, with the Honorary Secretaries, to form a *Committee of Reference*, the duty of which shall be to determine the acceptance of communications referred to it by the Honorary Secretaries. The Council shall be elected by ballot at the Annual Meeting. One third of its members, exclusive of the Honorary Treasurer, the Honorary Editor of the 'Reports,' and the Honorary Secretaries, shall be replaced annually by an equal number of ordinary members of the Society. An Extraordinary Meeting of Council may be called (1) by the Chairman of Council, or (2) by the Honorary Secretaries, and (3) shall be called by the Honorary Secretaries on the requisition of any five members of Council. Seven days' notice of such extraordinary meeting must be given in writing by the Honorary Secretaries to every member of Council upon a summons paper specifying the object for which the meeting is called.

REPORT OF THE COUNCIL, 1906–7.

Read at the Annual General Meeting, held at No. 11, *Chandos Street, Cavendish Square, W., on Friday, July the* 19*th,* 1907.

The Council have the pleasure of reporting that the prosperity of the Society is well maintained. During the session the Society had to mourn the loss by death of Dr. A. E. Sansom, an original member, who always took the greatest interest in its proceedings. He occupied the chair when the formation of the Society was proposed, and was the first Chairman of Council. Dr. Sansom was for many years Physician to the North-Eastern Hospital for Children and to the London Hospital. He was well known as an authority on diseases of the heart, and his genial manner and kindness endeared him to all who knew him.

On November the 23rd, 1906, at a Special General Meeting of the Society, the following resolution was passed :

"That The Society for the Study of Disease in Children declines, under the present circumstances, to join in the scheme of amalgamation."

The meetings have been well attended, and many interesting cases, specimens, and papers have been brought before the Society and discussed. A Special Meeting was held in December for a discussion on "Rickets" in all its aspects. The Wightman Lecture was delivered by Dr. Frederick Taylor on the subject of "Pneumonia in Children."

The Provincial Meeting was held at the County Hospital, Bedford, on June the 15th. Many interesting cases and specimens were demonstrated, and subsequently the meeting proceeded to the discussion of "Acute Rheumatism in

Childhood," followed by the reading of papers. The chair was taken by Dr. R. H. Coombs, the senior member of the staff of the County Hospital. In the evening there was a dinner at the Swan Hotel, when thirty-four members and guests were present. The Meeting was a very successful and pleasant one, and the Council desire to express their indebtedness to Mr. Henry Skelding, who undertook the local arrangements, and to those members of the profession in Bedford who took part in providing the programme.

The finances of the Society are in a very satisfactory condition.

TREASURER'S REPORT.

The Treasurer reports with pleasure the financial soundness of the Society and the gradual increase of its capital.

During the past year a larger sum has been invested than in any previous year, advantage having been taken of the low price of stocks to purchase £200 Consols, thus bringing the invested capital of the Society up to £700 Consols. It will be noticed in the current accounts that a considerable and unusual expenditure has been incurred owing to the discussions and to the circulars issued relative to the scheme for the amalgamation of the various London societies. This is seen in an increase of £27 2*s*. 7*d*. in the printer's bill, of £3 6*s*. 5*d*. in the shorthand writer's account, and £5 16*s*. 8*d*. paid directly towards the expenses of the scheme, making altogether a sum of £36 5*s*. 8*d*. disbursed in connection with this proposal. After discharging all debts there remains in the hands of the Treasurer a sum of £135 12*s*. 8*d*. to be carried forward.

Of the Wightman Lecture Fund the balance of £20 was paid to Dr. Frederick Taylor, and a further subscription of £20 has been received from Mr. Wightman for the year 1908.

R. CLEMENT LUCAS.

UNION OF MEDICAL SOCIETIES OF LONDON.

Special General Meeting held at 11, Chandos Street, Cavendish Square, W., on Friday, November the 23rd, 1906, Mr. R. Clement Lucas in the chair, to receive the following resolution of Council, which they recommended for adoption:

"That The Society for the Study of Disease in Children declines, under present circumstances, to join in the scheme of amalgamation."

The Chairman of Council (Mr. R. Clement Lucas) said: Gentlemen,—As this is a resolution of the Council, it has been suggested to me that it should be put from the chair. And as I was the representative originally chosen for this Society in the amalgamation scheme last year, when it was first promulgated, I think, perhaps, you would like me to give you a short history of what has been done. This scheme originated in a meeting at the College of Physicians in the summer of 1905, and it was then suggested that there should be a higher Society, an Academy or Royal Society of Medicine. What happened on that occasion was that one gentleman proposed that every Society housed at the Medical Society's Rooms, or at the Royal Medical and Chirurgical Society's Rooms, should send a representative, and that is how it is that an attempt to amalgamate the whole of the medical Societies of London has come about. Now, I was chosen, and given a watching brief, and I was faithful in that, I think, to the best of my ability. I was not to commit the Society in any way, and I endeavoured not to do so. I once spoke at one of the meetings, and that was to criticise the financial aspect of the scheme, and I am prepared to do that again to-night. Indeed, the financial aspect of the scheme at the present time is so unsatisfactory that I do not think any Society that has any

capital could possibly commit that capital into the charge of the amalgamation scheme. Now, on October the 10th, 1905, a letter was written by your representative in answer to an inquiry from the Secretaries of the amalgamation scheme, as to whether this Society was prepared to enter the scheme or not. And this was our reply. It is dated October the 10th, 1905 :

" Dear Sir,—In answer to your inquiry as to whether The Society for the Study of Disease in Children would be willing to join in the amalgamation scheme, I am unable to give any definite answer. The scheme has been before the Council, and they decided that until it was known whether the Royal Medical and Chirurgical Society and the Medical Society could arrange a union, it would be useless for the Society to consider the matter."

That I wrote at the instigation of the Council of that time. Now, since then, an organising committee has been appointed, and this organising committee has brought out another proposal, which differs from the original proposal in some respects. In the original proposal, to which this letter was an answer, it was proposed that there should be as many as sixteen Societies, sixteen Branches. In the new proposal there are now as many as eighteen, and I would ask you to consider whether that is likely to be more financially sound with eighteen than with sixteen. In other respects also the second *Report* differs somewhat from the first.

In the first you are led to suppose that there would be a Royal Society or a Royal Academy of Medicine. If you look at the second *Report* you will find no mention whatever made of a Royal title, and, I think, this is somewhat significant. The title of the Society is given on page 4 of their scheme : " The decision with regard to the title of the New Society, and such question as the election of Fellows and rules of procedure, shall be left to the vote of those Societies which amalgamate." There is no mention of anything beyond that. I don't know whether you know how difficult it is to obtain a Royal

Charter, and perhaps it would be interesting to you to know what happened to the Royal Medical and Chirurgical Society in that respect. Now, a Royal Charter cannot be altered except by Act of Parliament, and no Royal Charter can be obtained except by petitions to the Privy Council, and sent to the King. The Royal Medical and Chirurgical Society was founded in 1805, and in 1812 it petitioned for a Royal Charter. This was opposed in 1812, and the Royal Charter was not granted. And it was not until twenty-nine years after its foundation, namely, in 1834, that the Royal Medical and Chirurgical Society obtained its Charter. And if you look up what happened at that time, you will find it is stated that the King, owing to the long and good work done by the Society, was prepared to grant it a Charter. Therefore, I think, as regards the Royal Charter, this combination of Societies may find that they may get opposition from the Societies that have gone out, and that no Royal title is likely to be granted. The fact is, the Medical Society is a very old Society, and that Society has now gone out of the amalgamation. It is quite possible that if any proposal of this combination of Societies for a Royal Charter were to be made, the Medical Society would oppose it. That Medical Society is a combination of a very large number of members of the profession, but it has not got a Royal title, and it might wish to get a Royal title too.

Now you will see what is going to happen under this scheme.

The 'Reports' of all the Societies disappear under this new amalgamation; there will no longer be any 'Transactions' such as we have been accustomed to have. The Clinical Society's, the Pathological Society's, the Royal Medical and Chirurgical Society's series and our own would disappear under the amalgamation scheme, and in place of it you will have hurriedly produced 'Proceedings,' published monthly, and illustrated according to a certain scheme—I suppose rapidly produced illustrations. These, you are told, you will bind up at your own expense. And

you have it thrown out as a favour that you may have the 'Reports' of other Sections, which you may not require; the whole of the 'Reports' of other Societies may be sent to you at the same time. Now, my own experience of the 'Proceedings' is that they are unsatisfactory. We have had some experience of them, inasmuch as the Royal Medical and Chirurgical Society recently had 'Proceedings,' which have been dropped. And people used to receive these 'Proceedings,' and, I believe, never had them bound.

The crux of the whole situation rests upon the matter of finance, and upon this point I wish to address to the Society a few remarks. The finance of the scheme is stated on page 6. There you read: "The entire management of the Funds of the Society shall be in the hands of a Finance Committee, subject to and acting as a Sub-Committee of the General Council"; and a little further down you read: "The invested Funds and other property of any Society joining in the amalgamation shall at once become the property of the New Society." In other words, you give up the whole of your capital, everything belonging to you, and you take what they choose to give you, or what the general committee choose to give you. You will have a dole given to you for your 'Proceedings,' over which you would have no control, except one representative on the committee. Now, in this scheme it is suggested that there may be a balance of £1200, and this balance may be used for depreciation, for reserve and building fund, and for redemption of debentures. You will see that mentioned on page 3, "A balance of income over expenditure may be expected to the amount of £1200, for the provision of a fund which may be used for the redemption of existing debentures or for the formation of a building fund." Now, the Royal Medical and Chirurgical Society has 33,300 debentures, which it costs £999 a year to pay the interest on; and you take over the responsibility of these debentures if you pass into the amalgamation. I am told that it will require £1000 a year to pay off these debentures by

the time that they become due in 1939. It is well known that they are behind in their payments. I believe, myself, that the scheme, as it here stands, is absolutely and hopelessly unsound. I do not say this without having studied it very carefully. And, mind you, I have kept my eye on this thing the whole way through, and the only time I spoke was on this financial question. You see that the Medical Society is represented here as contributing so much. The matter is also given you without the junction of the Medical Society, and it is said that the financial difference will be very little, if anything, a little in favour of amalgamation. But then you see, in a little note, that there will be two meeting rooms, and one other room, less for the purposes of the New Society. Now the Royal Medical and Chirurgical Society has, I believe, only one meeting room, and one smaller room, the Council room; how are eighteen Sections to meet there? Surely some very great change will have to be made in the building, for which there is no money whatever; and I cannot conceive how these different Sections can possibly be accommodated. Now, I am prepared to say that I believe these estimates of income are very much over-estimated, and that the expenditure is under-estimated. If you look on page 12 you will see that the Medical Society is a progressive body, and that its income is steadily on the increase, both from meetings and from subscriptions. In 1900–1 they had £532 from subscriptions, while last year they had £603. Their income from occasional lettings in 1900–1 was £876, while in 1904–5 it was £954. Now, that Society is in a sound position; it is in an increasing position. The weak point in the finance of this scheme is, that the income is from subscriptions, and not from anything else but subscriptions, except a very small sum from invested funds. The difference in the income from a Society and the income from a share in a company is very, very great. If you have a share in a company and that company goes down you have to stick to that share, because nobody will

buy it, and any liability on that share you will have to pay. But it is a quite different thing in the matter of subscriptions to a Society; the moment you send in your resignation there is no further claim. And what will happen if it is seen that this is not working properly? Suppose you are asked for a further subscription? There will be wholesale resignations. In that way I think I can show you that the difference is very great in the two cases. There is one other reason why I think if you join in this Society the various Sections of the Society will gradually die out, and it is this: that there will no longer be any incentive to obtain new members. If from the amalgamation scheme a certain sum is allotted for each section, then there is no incentive for Secretaries to do their work. And if amalgamation tends to go down in regard to amount, one Secretary will say: Why should I work and obtain new members and throw in money in that way when it will have to be all pooled, and the other Societies or Sections who are not taking trouble will gain the benefit?

I want to criticise also the "Monthly Proceedings Cost" on page 14. I believe that this is very much under-estimated. It is said that £228 12*s*. should be paid for the monthly 'Proceeding,' and that that ten issues will cost £2286. Now, we have had calculated up in numbers the number of words. And I am told that their number is altogether wrong. I have been in communication with a gentleman who has been to the trouble of counting the whole of the words in all the 'Transactions.' I am quite incapable of such a thing myself; it would take me years. But he tells me that there were 1,712,705 words in the 'Transactions' of the various Societies, whereas it is stated here that there were 1,580,000. So there is a discrepancy. And it is estimated that the output in the future will be less—1,561,600. I believe this gentleman who gave these numbers has also been in communication with the gentleman who supplied the numbers before, and he is told that this representation here of 610

words on a page is again a wrong estimate, because it could only be crammed in without a single paragraph; and directly you have a paragraph, or if you have any open work at all, these words cannot be got in. He tells me that it does not allow for the annual 'Reports' of the whole Society, or for the annual 'Reports' of any Society, it does not allow for the finance statements, and it does not allow for the list of fellows and members. He calculates that 330 more pages will be required for that. Now, I am unable to go into these details myself, and I have taken them from a gentleman that I believe that I can thorougly rely upon as having gone into these details. Under these circumstances, you see, the cost of the 'Proceedings' will be very much greater. But there is one thing I think I can point out to you, and which we can understand, and that is the cost of the illustrations. You will see that the illustrations are put down as £25 for each issue—Appendix E, page 14, last paragraph. Ten issues will make £250, therefore. Now, I took the trouble to look into the cost of illustrations of some of the other 'Transactions,' and I find that in 1905 the Pathological Society spent £368 upon its 'Transactions,' and that they spent £107 12*s.* 6*d.* on their illustrations. The Royal Medical and Chirurgical Society spent almost exactly the same sum on their volume, and if we estimate that their illustrations were in any way equal to the other we must estimate something like £100 for theirs. Theirs is a leaded volume, with big print, and fatter, but not so wide or so long. Now, the Clinical Society gives you definitely the amount they spent. They spent £205 on their volume, and they tell you that they spent £62 3*s.* 9*d.* on their illustrations, making the total £269 16*s.* 3*d.* for the illustrations in three 'Transactions.' If the illustrations are to go on as they have been, and we do not want our illustrations dropped out of our 'Reports,' that would leave you £20 less than nothing to illustrate fifteen other Sections, or minus £20 to illustrate fifteen Sections. So I think I may say that there is not the slightest doubt

that if illustrations are to go on in any way as they have been that this is altogether under-estimated. And it has been suggested to me that the cost of these 'Proceedings' would be at least £3000 instead of £2286 if they are properly illustrated and properly brought out, with the lists of members and financial statement.

Now, gentlemen, I have little more to add, except to point out the position of our Society at the present time, and what it might be under this amalgamation scheme. What you would lose would be all your accumulated capital, which now amounts to £700 Consols, with a good balance at your bank. You would lose even your very name, you would lose your published volume of 'Reports,' which is now so well known, not only here, but on the Continent, and, what is worth more than all, you would absolutely lose your independence for the future; you would shut off from you all vista of future development. You cannot at any time hope to have a home of your own, with your meeting room or your museum—which is a pet idea of my own and others—a library, and a development of this section of medicine in a way which has not hitherto come about. You lose all incentive to further progress, and you will become, to my mind, a mere spoke in a wheel of a cumbersome machine which must necessarily fall to pieces of its own weight.

I have spoken thus from the Chair because this represents the opinion of the Council at the last meeting, and the resolution which is thus proposed from the Chair is: "That The Society for the Study of Disease in Children declines, under present circumstances, to join in the scheme of amalgamation."

It is not really necessary for it to be seconded.

Mr. Ernest Clarke: Is it absolutely definite that we should not have 'Reports'? that we shall only have these monthly 'Proceedings?'

The Chairman: It is absolutely certain.

Mr. Ernest Clarke: That is absolutely definite?

The Chairman: Absolutely certain.

Mr. Sydney Stephenson : Sir, As an original member of the Society and as one who takes a great interest in its welfare, I should like to be allowed to second the resolution of the Council. I cannot, personally, see that there is anything whatever to be said in favour of amalgamation as regards this Society. It is ridiculous to enter into any sort of arguments, because Mr. Lucas has already very lucidly put the case to us, and I know it is ridiculous to try to slay the slain. At the same time, the arrangement strikes one as a peculiarly lop-sided one. The amalgamation proposes that we should hand over to them everything of which we are possessed, including our good name. And in return offers us what ? Total extinction, gentlemen, as a reward for that. I trust you will follow the example set you by the Medical Society, the largest general Society, by the Ophthalmological Society, which is the largest special Society, and refuse resolutely to have anything whatever to do with this wild-cat scheme. (Hear, hear.) I ask you, gentlemen, not to barter away your birthright for a mess of pottage, and a mess, if I may say so, of extremely indifferent pottage.

The Chairman : I should like to say that many gentlemen have come a long distance to vote on this question, and it is necessary for them to catch trains. I do not wish to shorten the discussion, but if anyone has any further remarks to make, I hope he will speak shortly, and to the point.

Dr. W. C. Chaffey (Brighton) : I should like to make one remark, and that is in connection with a point which you yourself have not dwelt upon, namely, that any Section which may be formed may ultimately become combined with another Section, and so may lose its individuality in that respect also. So there may be no real Children's Section ; it may be combined with the Women's Section, or some other Section. As far as I can understand from that statement which was issued by the amalgamation committee, there will be no guarantee that the Children's Section will remain distinct always. The

great idea in the formation of this Society was that children's diseases should receive that special attention which was their due, and that, of course, was the reason why the Children's Hospital at Great Ormond Street was established. Since that, no doubt, there has been great progress in the observation of children's diseases, and in the treatment of them. So that it seems to me it would be a very great pity if at the present stage the good work which has already been done by the members of this Society—I cannot say that I ought to include myself, because I seldom attend, living at such a distance—were discontinued or interfered with. I have followed with the greatest interest everything that has been done, and I am sure there is no Society which has done better work. I shall feel very much for Dr. George Carpenter if the scheme is passed, because the 'Reports' in their present form would be discontinued. He has done a great deal of valuable work for the Society in that way, and he has also worked very hard generally for it. I am sure I should be very sorry to see them discontinued.

Dr. C. O. Hawthorne: I should like to ask if there have been any communications between the Council of this Society and the Committee charged with the production of the amalgamation scheme since the last general meeting of this Society. There were the instructions to the Council which were passed at the last meeting: (1) That certain charges incurred by the Amalgamation Committee should be paid; and the other that our representation on that Committee should be continued. What I should like to hear is whether those instructions have been carried into practice, and whether communications have been passing between the Council and the Amalgamation Committee.

The Chairman: I think the Senior Secretary will be able to answer that. He will tell you that we have received notice that we should have to return an answer by December the 7th. It was not possible, I think, for this Society to send a member to meet the Amalgamation Committee

unless we had some notice of when the Amalgamation Committee was likely to meet. We are, therefore, helpless in this matter, and there has been, so far as I know, no direct communication except by letter to the Secretaries in the following terms: "We shall be obliged if you will inform us the decision of your Society on December the 1st next. Additional copies of the *Report* may be obtained direct." We obtained additional copies of the *Report*, and everyone who has had notice of this meeting has had a copy of the *Report*. Do you wish that letter to be read?

Dr. HAWTHORNE: If it refers to the subject to which I made reference I should like it read. My reference is, that at the Annual General Meeting of this Society, held in July, the Council was instructed to pay certain charges of the Amalgamation Committee, and to continue its representation on that Committee. If this has been done, there, of course, has been the opportunity for this Society to learn, through its representative, what exactly have been the proceedings of the Amalgamation Committee since July. But if that has not been done, it is manifest that it is not a sufficient answer, if I may say so with all deference, to say that we have had no notice from the Amalgamation Committee. Unless we conveyed to the Amalgamation Committee our willingness to pay our share of the expenses, and to continue our representation, there has been no opportunity.

The CHAIRMAN: I believe there has been no meeting since. If you would like to hear this letter read—

Dr. HAWTHORNE: If you please.

Mr. FRANCIS JAFFREY (Secretary): It is dated July the 20th, and is addressed to the Secretary of The Society for the Study of Disease in Children:

"44, BROOK STREET, W.
"*July 20th*, 1906.

"*To the Secretary of* THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

"DEAR SIR,

"*Union of Medical Societies of London.*

"We are instructed by Sir William Church to forward you the

enclosed Report of the Organising Committee of the above as amended and unanimously adopted by the Committee of Representatives of various Societies on the 17th inst.

"You will notice that on page 4 of the Report it is suggested that if your Society should consider the Report, and that if your Society approves of the scheme as drawn up, it should appoint a Representative to serve on a New Committee. Each Society joining the Union will have a representative on this Committee. In addition the Presidents of the Medical and Royal Medical and Chirurgical Societies will have seats on the Committee if their Societies join the Union.

"You will further notice that it is suggested that this Committee should draw up rules, deal with the necessary formalities of amalgamation, and form the Council of the Society for the first year. At the end of this period it is suggested that the Council should consist of a President, the Presidents of the various Sections, two Treasurers, two Librarians, two Secretaries, and eight other Fellows.

"We shall be obliged if you will inform us of the decision of your Society by *December 1st next.*

"Additional copies of the Report may be obtained *direct* from Messrs. Bale, Sons and Danielsson, 83, Great Titchfield Street, W., at cost price.

"Yours faithfully,

"Arthur Latham, } *Hon.*
"Herbert S. Pendlebury, } *Secretaries.*"

Dr. Hawthorne: With all respect, I should like to say a few words about this matter. I submit that the letter which has been read to us by the Secretary is not an answer to my question in the very least. That is a formal communication from the Amalgamation Committee to the Secretary as the Secretary of this Society. It is not an answer to any communication which has been sent by the Secretary at the instruction of the general meeting of this Society, and I submit that the proper proceeding in view of the vote which was taken in July was for the Secretary to send the money immediately to pay the account which had been submitted, and to intimate that this Society was willing to continue its representation upon the Amalgamation Committee. If this is the only communication which we have received from the Amalgamation Committee since the meeting in July, it is manifest that those instructions of this Society have not

been carried out, and I think it is reasonable and proper that we should have some explanation from the authorities as to why that has not been carried out. We are to-day very largely in a prejudiced position in reference to this scheme of amalgamation, and we are in that prejudiced position because, for some reason or other which we need not now consider, the Council thought it well to withdraw their representation from the Amalgamation Committee. If they did not come to that resolution in so many words, they came to it as a matter of practice and fact, because the Council intimated to the Amalgamation Committee that the share of expenses which was allotted to this Society would not be paid, and consequently the Amalgamation Committee very naturally dropped sending any summonses to our representative to attend the meeting. So I think it is very unfortunate that we should now be asked to consider whether this Society shall or shall not join in the amalgamation scheme, quite ignorant of information which might have been in our possession, and which I submit should have been in our possession if the instructions of the general meeting of the Society in July had been carried out. Upon the question of amalgamation, personally, I feel that the advantages which will result to the profession from a proper scheme of amalgamation are very considerable, and, therefore, I am naturally desirous that this Society, in which I take an interest not less intense, at all events, than other members who have spoken, I am, I say, naturally anxious that this Society should be included in such a scheme. I am not prepared to criticise the proposed financial arrangements; they are elaborate and complex, and they need special consideration. I understand that that consideration has been given by a competent committee, in whom personally I am disposed to place confidence, and whatever be our views on this amalgamation scheme, I think it is only becoming that those of us who speak upon the matter should at least recognise the earnest spirit and exalted sense of duty which has prompted the members of the Amalgamation

Committee to give so much time and so much study to what is a very important question. (Hear, hear.) Of course, any scheme which is proposed is naturally a cockshy for the critics. It is always much easier to criticise a scheme than to create one, and although I am not prepared to meet the criticisms which have been advanced from the Chair on the financial aspect of the scheme, I want to point out that the advantages of this Society—thinking only for the moment of this Society—the advantages are not all on one side. Suppose that this scheme falls to the ground, personally I should regret that as a disaster to the profession. But supposing it does not fall to the ground, then there will undoubtedly be a Section for the study of children's diseases, and it is not necessary to refer, in detail at least, to the genesis of this Society to cause it to be recognised that there are those who will be very willing indeed to take a leading part in the creation of such a Section. Perhaps some who have not been already in sympathy—for good reasons or otherwise, I do not know—will take steps to see that a Children's Section in the proposed New Society will be very energetically worked. Now, in that case, remember that the attractions which the New Society can offer are very considerable, even to your own members. By paying exactly the same amount which you pay here, namely, one guinea, you can very readily have the same advantages, and for the very small sum of, I think, half a guinea, can qualify yourselves to use the enormous and valuable library which is in Hanover Square. I think it is impossible to doubt that there will be defections from this Society.

The Chairman: I should like to correct Dr. Hawthorne on that point. It is one guinea for the use of the library, not half a guinea.

Dr. Hawthorne: Well, it is a comparatively small sum, a guinea a year, and the man has this magnificent library at his disposal. I want, therefore, to put it to members of this Society that the amalgamation scheme,

if it goes on, will be able to present an attractive front to a considerable number of members of the profession, and I feel sure that we shall lose a certain number of members from this Society from that cause. The resolution, as I understand it—I have not the exact wording before me—is merely a temporary action. It does not propose to set up any absolute bar to action in the future, and it may be that we shall hear very shortly—I had myself hoped that we should have heard something to-day—from the Amalgamation Committee, which will, to some extent, change the complexion of affairs. Hence, in these circumstances, and in view of the nature of the resolution which has been drafted, I am not proposing to move an amendment to it. But I think it is advisable that members of the Society should not be led into an indiscriminatingly hostile attitude towards the proposal, with which large numbers of the profession have very keen sympathy, and with which, it must be remembered, the majority of our members, as proclaimed by the celebrated postcard vote, are in favour. A vote has been taken by postcard, and the result of that was a majority in favour of amalgamation. A vote was taken at the last meeting, which showed a considerable amount of sympathy in the same direction. Therefore, whilst no doubt the scheme does offer an opportunity which has been taken advantage of for some perfervid eloquence, I do think, in view of the position which is occupied by a large number of the profession, and by large numbers of our own members, we should abstain from taking up an attitude which shows no sympathy towards this proposal. Our present resolution, which it is suggested we should pass, holds us only for to-day or to-morrow, as the case may be. Personally I hope the Amalgamation Committee will not be discouraged by the criticisms which have been passed upon the scheme, but will endeavour even yet to formulate a scheme which will attract great numbers of the Societies in London.

Dr. Frederick Taylor: Sir, I was present at the last

general meeting, when I had the opportunity of saying a few words in connection with this Organisation Committee. I think I am one of only two members of the Organising Committee who are members of this Society. I may say at once, with regard to what Dr. Hawthorne has said, that this *Report* which we have here was issued after the Organising Committee had, by separate sub-committees, met every representive of these Societies who had been willing to negotiate. I think that in consequence of what one may consider the unfortunate action of this Society, comparatively early, the Organising Committee did not meet any representatives of this Committee—if I am wrong perhaps the Secretaries will inform me. This was issued, and in that sense it is perfectly true, I think, that we have not had any meeting of the Organising Committee at which any members of this Society have been represented. I do not say this was a need which suggested itself to this Committee, and perhaps, on the other hand, it ought to have suggested itself to some members of the Organising Committee, that after the vote of last July at this Society we might, perhaps, have had some formal or informal meeting of members of the Organising Committee on one side and of this Society on the other. But as a fact there was at the time no arrangement, no apparatus, if I may say so, for the purpose, and it seems to have escaped the notice of both sides that a meeting might usefully have been arranged for this Society, just as it was arranged for the other Societies, before July. I very much regret, as it may well be supposed, that the Council of this Society has come to the conclusion which it has. I have felt, as the last speaker has, that this is not final, that it is possible when the Organising Committee gets to work, if it has got other Societies to join together, that then our Society may also possibly see its way to come in later on. I have been very much interested to hear your criticism, sir, on the financial scheme. We did take a lot of trouble about it, and, of course, it is a charge that is constantly made against

financial schemes that the income has been estimated too high and the expenses have been estimated too low. The income, I believe, has been estimated very low, but I have really—I may be wrong, and others also may be wrong—great confidence, at any rate, on the basis of all the Societies coming in. Supposing all the Societies, excluding the Medical Society, had come in, we should have an income considerably greater than has been stated. One or two possibilities have been left out of consideration in that income as stated in this *Report*. But it is worth consideration. It is that there are many practitioners, physicians, and surgeons in the country, or in provincial towns, who will be very glad, I believe, to join the Amalgamated Society at the fee of three guineas, when such a society exists. For instance, gentlemen in Liverpool, in Birmingham, or in Manchester, from time to time come to town to a particular meeting or Society. They do not want to subscribe to all the Societies, but they want to come, say, on one occasion to the Clinical Society, perhaps sometimes to the Pathological or the Royal Medical and Chirurgical Society, in connection with a particular paper. It is quite true that they can come as visitors, but many of them will prefer to come as members. They will willingly pay that subscription to join the Amalgamated Society, where they will have the opportunity of coming to the meetings of different Sections. I think that a source of income—I do not say an extremely abundant source—which has not been reckoned upon. That shows that there is one side of the question which has yet to be considered, and it has received a less favourable construction than one might have put upon it. You, sir, have asked what are we to do with the rooms. You say there is one meeting room and a little room in Hanover Square. But the house in Hanover Square is not only consisting of a ground floor; there are crowds of rooms. It is true they are occupied by tenants at present, but the *Report* expressly shows that the tenants can be got rid of, and so

I do not think that is so large a difficulty as you have seen fit to infer. But I do not wish to speak in strong opposition to what has been said. The Council must be trusted by its members, and in connection with this Society I shall not move any resolution to oppose what is now before it, though I cannot come here without speaking, and I could not be absent from this meeting because I am interested in the matter of amalgamation. It is true you can lose your individuality, but surely there is something in our Society contributing to a large concern which shall be representative of the whole of medicine and surgery in all its departments, not only in London, but in the United Kingdom. It seems to me it is a pity it cannot rise to the conception of a large and grand idea like that. It seems a pity we are content to have a number of little Societies competing with one another, with active and energetic Secretaries seeking to get members from one another, you might almost say, and increased business in various ways. I do not take such a gloomy view of what the Secretaries and Editors of the Sections will do. There can be Secretaries and Editors and they can be as energetic as they are now in the individual Societies. There is no necessity for us to fall into a slough of despond and into a condition of idleness directly a large association is formed. I do not think that is at all necessary. I have spoken partly in connection with what has been said in the discussion and partly in answer to some criticisms which you yourself have made.

The Chairman: Well, gentlemen, we have heard both sides of the question. We have heard Dr. Taylor's remarks and Dr. Hawthorne's criticisms.

Mr. Lockhart Mummery: I should like to move an amendment, sir. I think the question has not been sufficiently considered yet. It is a very important question which we have to decide this afternoon; it concerns the condition and the future of this Society for a very long time, and before voting on this subject I should like

first of all to put a few points to you, and then afterwards I shall move an amendment. After all, the point is what does this Society lose if it joins this scheme? I take it that the only thing which this Society stands to lose by joining the present amended scheme of amalgamation is its invested funds. That is to say, if the New Society is not a success this Society will be as it was before, except that it will have lost money which it has now invested. That, of course, depends on the financial soundness or otherwise of the amalgamation scheme which has been organised. Well, gentlemen, we need not say any more about whether it is going to be a success or not. The proposal has received very careful attention from many people who have taken a great deal of care and trouble for the whole of last year, and even longer. An accountant's opinion has been taken, and various estimates of the value of the Royal Medical and Chirurgical Society's premises have been obtained, and in particular one may mention the Medical Society. The Medical Society's Council decided to have a new valuation made of the Royal Medical and Chirurgical Society's premises, and after a very careful valuation had been made they came to the conclusion that, if anything, the value of the Royal Medical and Chirurgical Society's property had been under-estimated. The Medical Society's Council then decided in favour of amalgamation. The fact that the Medical Society did not subsequently join has nothing to do with the financial question. The scheme was not thrown over by them on the financial question, but on purely sentimental grounds. The only thing which this Society is risking to-night, if it goes into the scheme, is that it remains practically as it is now. We keep our present rooms and our Secretaries and our Council; we have a vote on the Committee, on the general affairs of the whole body, and we remain as we are except that we pool our funds. ("We lose our Reports.") No, we do not. It is true that they would be modified somewhat, but we should not lose them. And we have equal authority under the scheme with every

other Society in deciding what shall be done in regard to the 'Reports.' We appoint our representative on the Committee, and he can see to our interests in that matter. Then, gentlemen, what it comes to is this: Are we going to throw out all possibilities of amalgamating? Are we going to refuse to join the amalgamation scheme simply because we may be risking our capital? We have not got such a very large amount of capital, and, gentlemen, this Society has taken a certain amount of trouble to find out what is best to be done. It is true the Council have decided against amalgamation, but it was not a unanimous vote by the Council, and the post-card vote which was taken was in favour of amalgamation. So I take it that the Society is really in favour of amalgamation.

The Chairman: I must interrupt you to say with regard to that that it was a mere abstract question which was sent to the members by post-card. Gentlemen at that time had not seen any of the schemes, and it was simply an abstract question to which they were asked to reply.

Mr. Mummery: It is true it was an abstract question, but the Society was asked if it was in favour of amalgamation, and a majority of the Society decided that it was. Finally, I would point out that I think it would be an unwise policy on the part of this Society, which has always been in favour of progress, and has prided itself on its progress and on being to the forefront and up-to-date, it would be a great mistake, I say, if this Society, simply because it was risking its small invested property, were to refuse to join a big amalgamation scheme like this, which is not formulated for any private interests, but for the good of the science of medicine and surgery in London and in England. I ask you, therefore, to vote in favour of amalgamation, and I move that this Society is in favour of amalgamation under the new scheme.

Mr. Sidney Stephenson: On a point of order, Sir, I would remark that that is a contradiction. Or I would ask, is that a valid amendment?

Mr. John Poland: It is really a direct negative.

Mr. Mummery: The other is not.

The Chairman: Will you give me the wording of your resolution, Mr. Mummery? It is a direct negative which you have proposed, therefore it will make no difference. It is simply a matter of for or against the resolution. I think, gentlemen, that we have now heard both sides, and the simplest way will be to vote on the resolution.

Mr. Ernest Clarke: I asked a question in the early part of the meeting about the 'Reports.' Now we have been told, and I have been referred to page 20 on the *Report* of the Amalgamation Committee, that we shall be able to retain our 'Reports.'

The Chairman: No.

Mr. Clarke: We can have our 'Proceedings' bound?

The Chairman: The 'Proceedings' which are sent out monthly can be bound at your own expense.

Mr. Clarke: Yes, at our individual expense.

The Chairman: Yes, if you give due notice. Many gentlemen who have come some distance from the country to vote on this question must leave at 6 o'clock.

Dr. G. A. Sutherland: I think this should be discussed; I do not think there should be any time limit. If members are anxious to discuss it they can be allowed to. It is a special meeting, and I do not think there should be any time limit.

Dr. Leonard Guthrie: With regard to the publication of our 'Reports,' there is a paragraph on page 20 of the *Report* of the Amalgamation Committee which Mr. Ernest Clarke seems to have omitted to see, that "Societies which own or partly own Journals shall make their own arrangements with regard to these, quite apart from the question of amalgamation." Therefore there is no reason why our 'Reports,' excellent as they are, should not be published as before. The Neurological Society is in the same plight as we are, and it has been arranged to the satisfaction of that Society that they should join in the scheme, and that 'Brain' should be published as before. ("Where is the money to come from?") We shall

have to pay for it as the Neurological Society now pays for it.

Mr. H. L. Carre-Smith: I would like to ask Dr. Hawthorne one question. He refers to certain eminent members of the profession who would not join this Society, but would join a Children's Section of the Amalgamated Society. I should like to know who those men are that take such an interest in children's diseases.

Dr. Hawthorne: I cannot answer the question, because I do not know.

Mr. Mummery: Those who join the Section will be ourselves, who are *ipso facto* members of it.

The Chairman: I must ask members of the Society to address the Chair.

Mr. Carre-Smith: I understood Dr. Hawthorne to say that there are eminent members of the profession who would be willing to take a leading part in the formation of a Children's Section in the New Society, and I should like to know who they are. It seems to me that we have already the most eminent men in the Children's Society.

Mr. Milner Burgess (Harlesden): May I say a few words on the original motion? At the Harveian Dinner Sir John Tweedy made this remark:

> "There was a young lady of Niger,
> Who smiled as she rode on a tiger;
> They returned from that ride
> With the lady inside,
> And the smile on the face of the tiger."

If The Society for the Study of Disease in Children joins the amalgamation scheme they will ride inside. (Laughter).

Mr. George Pernet: I would like to make one remark about what Dr. Hawthorne said. I think he has rather assumed, and without evidence, that we have not paid the sum of money to the Amalgamation Committee which was our share of the expenses incurred and which our Secretaries were instructed to pay to that body. I am sure our Secretaries have paid the money; there is no

doubt about that, and I think that Dr. Hawthorne, in assuming that it had not been paid, rather casts a slur on the officials who have this matter in hand. With regard to this amalgamation scheme, I fully agree with what has been said against amalgamation. Of course there is a great deal which can be said on the other side, and there always is. But as far as The Society for the Study of Disease in Children is concerned I think amalgamation would be fatal to progress. We progress through our individuality, and if we throw ourselves into one of these great combines, we shall lose our individuality, and we shall become awfully slack about work, because no one will take the same interest in a Section that they have taken in a living Society. ("Why not?") Because we won't. (Laughter.) That is all. I know something about continental Academies. People connected with Societies go to sleep there over them; they are absolutely useless. Look at the Académie Française. That is thought to be a wonderful institution, but it is not. Look at the Germans. In Germany you find these Academies are simply of no use whatever, and the most amusing point is that where they have these wonderful Academies under Imperial patronage or Royal patronage they start outside Societies to do the same work, because in these Royal Academies they do no work. That is why I say we should have separate Societies in this country, so that we may transact some business. Personally I am very much opposed to any scheme of amalgamation for this particular Society.

Dr. Hawthorne: I do not ask permission to speak again, sir, but on a question of fact it will be well to have this point cleared up. It will be in the recollection of the meeting that I appealed specifically as to whether the instructions to the Council of this Society by the General Meeting in July had or had not been carried out.

The Chairman: I will answer it at once. That so far as it was possible it was carried out, that is to say, a communication was made to the secretary of the Organis-

ing Committee, and the cheque was paid and a receipt obtained. (Hear, hear.) I think, gentlemen, if no one has any other remark to make, it is well now to take the vote, and I will ask those of you who are in favour of the resolution: "That The Society for the Study of Disease in Children declines, under present circumstances, to join in the scheme of amalgamation," to hold up your hands.

(There voted in favour of the resolution 22, against 5.)

BALANCE SHEET FOR THE YEAR ENDING JULY, 1907.

Receipts.	£	s.	d.	Payments.	£	s.	d.
To Balance brought forward	222	1	7	By Hollebone Bros. & Trench, purchase of £200 2½% Consols, making £700 invested	175	1	0
,, Subscriptions and Entrance Fees ...	311	17	0	,, Amalgamation Scheme Expenses ...	5	16	8
,, Dividend on Consols	16	12	8	,, J. Bale, Sons, and Danielsson, Limited...	0	6	6
,, Messrs. Churchill, Sale of Reports ...	4	12	6	,, Adlard and Son	137	0	3
				,, F. Jaffrey	1	15	10
				,, H. Dickinson	22	9	8
				,, Medical Society of London	18	18	0
				,, G. Pulman and Sons, Limited	52	7	2
				,, W. Harris (Collector)	2	16	0
				,, Treasurer's Petty Cash	3	0	0
					419	11	1
				,, Balance carried forward	135	12	8
	£555	3	9		£555	3	9

INVESTMENT.

Consolidated Stock, 2½ %	£700

WIGHTMAN LECTURE FUND.

To Balance brought forward	£20	0	0	By Dr. F. Taylor	£20	0	0
,, Mr. Wightman	20	0	0	,, Balance in hand	20	0	0
	£40	0	0		£40	0	0

We, the undersigned, have examined the foregoing accounts, together with the Vouchers and Bank Book, and find them to be correct.

(Signed) SYDNEY STEPHENSON, H. S. CLOGG, } *Auditors.*
R. CLEMENT LUCAS, *Hon. Treasurer.*

July the 17th, 1907.

Meetings of the Society were held during the Session of 1906–1907 *at the undermentioned places.*

1. Friday, October the 19th, 1906.—No. 11, Chandos Street, Cavendish Square, W. Mr. Milner Burgess (Harlesden) in the Chair.
2. Friday, November the 16th, 1906.—No. 11, Chandos Street, Cavendish Square, W. Dr. W. J. Tyson (Folkestone) in the Chair.
3. Friday, November the 23rd, 1906 (Special Meeting to receive the following resolution recommended for adoption by the Council: "That The Society for the Study of Disease in Children declines, under present circumstances, to join in the scheme of amalgamation").—No. 11, Chandos Street, Cavendish Square, W. Mr. R. Clement Lucas in the Chair.
4. Friday, December the 14th, 1906 (Special Meeting for the discussion of "Rickets").—No. 11, Chandos Street, Cavendish Square, W. Dr. Edmund Cautley in the Chair.
5. Friday, January the 18th, 1907.—No. 11, Chandos Street, Cavendish Square, W. Mr. George Pernet in the Chair.
6. Friday, February the 15th, 1907.—No. 11, Chandos Street, Cavendish Square, W. Mr. Sydney Stephenson in the Chair.
7. Friday, March the 15th, 1907.—No. 11, Chandos Street, Cavendish Square, W. Dr. G. A. Sutherland in the Chair.
8. Friday, April the 19th, 1907.—No. 11, Chandos Street, Cavendish Square, W. Dr. Charles W. Chapman in the Chair.
9. Friday, May the 3rd, 1907.—No. 11, Chandos Street, Cavendish Square, W. Dr. T. R. Whipham in the Chair.
10. Friday, May the 17th, 1907 (the Wightman Lecture "Pneumonia in Children," by Dr. Frederick Taylor).—No. 11, Chandos Street, Cavendish Square, W. Mr. R. Clement Lucas in the Chair.
11. Saturday, June the 15th, 1907 (Provincial Meeting).—The County Hospital, Bedford. Dr. R. H. Coombs (introduced) in the Chair.
12. Friday, July the 19th, 1907 (Annual General Meeting).—No. 11, Chandos Street, Cavendish Square, W. Mr. R. Clement Lucas in the Chair.

LIST OF OFFICE BEARERS, PAST MEMBERS OF COUNCIL, WITH DATES OF SERVICE, AND MEMBERS OF THE SOCIETY FOR THE SESSION 1907—1908.

(*Revised October*, 1907.)

(O.M. = Original Member. T. = Treasurer. TT. = Trustee.* S. = Secretary. S with date attached = Past Secretary. P.S. = Provincial Secretary. P.S. with date attached = Past Provincial Secretary. Ed. = Editor of the Reports. C. = Member of the Council. C. with date attached = Past Member of Council. * = Life Member. C.C. = Chairman of Council. C.C. with date attached = Past Chairman of Council. W. = Wightman Lecturer. W. with date attached = Past Wightman Lecturer.

Elected

O.M. Abrahams, Bertram Louis, M.B., Assistant-Physician at Westminster Hospital; 14, Welbeck Street, W.

O.M. Achard, Alexander Louis, M.D., 34a, Gloucester Place, W.

O.M. Alliott, Alexander John, M.D., Surgeon at The Hip Hospital, Sevenoaks; The Vine, Sevenoaks. (C. 1906–7.) (C.)

1907 Amy, A. C., M.B., Kensington General Hospital, Earl's Court, S.W.

1904 Anderson, C. M., M.D., 146, Gloucester Terrace, Hyde Park, W.

1903 Anderson, J. Ford, M.D., 41, Belsize Park, N.W. (C. 1903–4, 1904–5.)

1901 Archdale, Mervyn A., M.B., East Riding Lunatic Asylum, Beverley.

* Trustees were first appointed at the Annual General Meeting of 1907.

Elected

1902 Armour, Donald John, M.B., Assistant-Surgeon at The West-London Hospital; Surgeon at The Belgrave Hospital for Children; 89, Harley Street, W.

1901 Armstrong, John T., Selby House, Beaumont Terrace, West Kensington, W.

O.M. Ashby, Henry, M.D., Physician at The Manchester General Hospital for Children; Lecturer on Diseases of Children at Owens College; 13, St. John Street, Manchester. (W. 1904–5.) (C. 1900–1, 1901–2, 1902–3.)

1906 Bailey, B. E. G., Midhurst, Sussex.

1904 Batchelor, Charles, 1, Fairfield Avenue, Staines, Middlesex.

1901 Battams, J. Scott, 32, Cedars Road, Clapham Common, S.W.

1904 Baumann, E. P., M.D., Box 1257, Johannesburg, Transvaal, S. Africa.

O.M. Beach, Fletcher, M.B., Physician at The West-End Hospital for Diseases of the Nervous System; Winchester House, Kingston Hill, Surrey. (C. 1900–1, 1901–2, 1902–3.)

1906 Beatty, Robert Moorhead, M.B., Assistant-Physician at The Belfast Hospital for Sick Children; 9, Clifton Street, Belfast. (C.)

1901 Beddard, Arthur Philip, M.D., Senior Assistant-Physician and Pathologist at The West-London Hospital; 44, Seymour Street, W.

1902 Blaikie, James Brunton, M.B., Physician at The Hospital for Consumption, Margaret Street, W.; 80, Brook Street, W.

O.M. Bluck, Walter Cardy, M.B., Byford House, York Road, Southend-on-Sea.

O.M. Blumfeld, Joseph, M.D., Senior Anæsthetist at St. George's Hospital; 7, Cavendish Place, W. (C. 1905–6, 1906–7.) (C.)

1903 Braithwaite, John, M.D., Physician at The Devonshire Hospital and Buxton Bath Charity, 2, Hardwick Mount, Buxton.

Elected

1906 Brewerton, Elmore Wright, Ophthalmic Surgeon at Metropolitan Hospital; Assistant Surgeon Royal Westminster Ophthalmic Hospital; 84, Wimpole Street, W.

O.M. Brightman, Frank, Aspley House, Broadstairs, Kent.

1901 Brown, John Henry, M.D., 14, Burngreave Road, Sheffield.

O.M. Browne, Hablot J. M., M.B., Hoylake, Cheshire.

1906 Brunton, Sir Lauder, M.D., Consulting Physician at St. Bartholomew's Hospital; 10, Stratford Place, W.

1904 Burgess, Harold, L., c/o Messrs. Worsfold and Hayward, Market Square, Dover, Kent.

1904 Burges, Richard, 4, Worcester Terrace, Clifton.

1901 *Burgess, William Milner, 43, Nicoll Road, Harlesden, N.W. (C. 1904–5.)

O.M. Burghard, Fred. François, M.S., Surgeon at King's College Hospital and at Paddington-Green Children's Hospital; 86, Harley Street, W.

1905 Burnet, James, M.D., Registrar at The Royal Hospital for Sick Children, Edinburgh; 6, Glengyle Terrace, Edinburgh.

1904 Burrows, Harold, M.B., Late Assistant-Surgeon at The Bolingbroke Hospital; The Cams, Grove Road, Southsea.

1901 Burt, Albert Hamilton, 52, Lansdowne Place, Hove, Sussex.

1907 Burton, Charles George, 91, Hertford Road, Lower Edmonton, N.

1902 Bythell, W. J. S., "Woodcliffe," Prestwich, Manchester.

1905 Campbell, Harry, M.D., Physician at The North-West London Hospital, and at The West End Hospital for Nervous Diseases; 23, Wimpole Street, W.

1902 Campbell, Henry Johnstone, M.D., Senior Physician at The Bradford Royal Infirmary. (C.)

1901 Campbell, Robert, M.B., Senior Surgeon at The Belfast Hospital for Sick Children; 21, Great Victoria Street, Belfast. (C. 1904–5, 1905–6.)

O.M. Carmichael, James, M.D., Consulting-Physician at The Royal Edinburgh Hospital for Sick Children; 22, Northumberland Street, Edinburgh. (C. 1901–2.)

Elected

O.M. Carpenter, George, M.D., Membre Correspondant de la Société de Pédiatrie de Paris, Physician at The North-Eastern Hospital for Children; late Physician at The Evelina Hospital for Sick Children; Editor and Founder of 'The British Journal of Children's Diseases'; 12, Welbeck Street, W. (C. 1900–1.) (S. 1901–2, 1902–3, 1903–4.) (Ed. 'Reports' 1900–1, 1901–2, 1902–3, 1903–4, 1904–5, 1905–6, 1906–7.) (Ed.) (C.C.)

1906 Carpmael, Norman, B.S., 375, Norwood Road, West Norwood, S.E.

O.M. Carre-Smith, Herbert L., 74, Holland Park Avenue, Holland Park, W. (C. 1902–3, 1903–4, 1904–5.)

1900 Cathcart, George C., M.B., Senior Assistant-Surgeon at The London Throat Hospital, 35, Harley Street, W.

O.M. *Cautley, Edmund, M.D., Physician at The Belgrave Hospital for Children: Physician at The Metropolitan Hospital; 15, Upper Brook Street, W. (C. 1900–1, 1901–2, 1902–3.) (S. 1904–5, 1905–6.) (C. 1906–7.) (C.)

1901 Cave, Edward John, M.D., Physician at The Royal United Hospital, Bath; 20, Circus, Bath.

O.M. Chaffey, Wayland C., M.D., Physician at The Royal Alexandra Hospital for Children, Brighton; 18, Palmeira Square, Hove, Sussex. (C. 1900–1, 1901–2, 1902–3.)

1901 Chaldecott, John Henry, Anæsthetist at St. John's Hospital for Diseases of the Skin, at The Metropolitan Throat, Nose, and Ear Hospital, and at The Italian Hospital; 60, Harley Street, W.

O.M. Chapman, Charles William, M.D., Physician at The Hospital for Diseases of the Heart, Soho Square; 21, Weymouth Street, W. (C. 1903–4, 1904–5, 1905–6.)

1901 Cheyne, William Watson, C.M., Surgeon at King's College Hospital, and at Paddington-Green Children's Hospital; 75, Harley Street, W. (C. 1901–2.) (W.)

1904 Clogg, H. S., M.S., Assistant-Surgeon at Charing Cross Hospital, and Surgeon at the Evelina Hospital for Sick Children; 143, Harley Street, W. (C.)

Elected

1905 Clutterbuck, L. A., M.D., Physician at the Marylebone General Dispensary; 43, Wellbeck Street, W.

1902 Cockburn, Robert P., 64, The Avenue, Ealing, W.

1902 Collier, H. Stansfield, Surgeon to Out-patients at St. Mary's Hospital, and Assistant-Surgeon at The Hospital for Sick Children, Great Ormond Street; 57a, Wimpole Street, W.

1901 Collier, Mark Purcell Mayo, M.S., Senior Assistant-Surgeon at The North-West London Hospital; Consulting-Surgeon at The National Hospital for Diseases of the Nervous System; 133, Harley Street, W.

1901 Cooper, Percy Robert, M.D., "Glenthorne," The Downs, Bowdon, Cheshire.

1901 Corner, Harry, M.D., Brook House, Southgate, N.

1905 Cowper, W. P., 30, Frognal Lane, Hampstead, N.W.

1901 Cox, Joshua J., M.D., Physician for Diseases of Children at The Clinical Hospital, Manchester; 38, Deansgate, Manchester.

1902 Cross, Ernest, W., "The Limes," Wallwood Park, Leytonstone.

1901 Crossley, Leonard, M.B., "Beechwood," Arnside, Carnforth, Lancashire.

1902 Crowley, Ralph H., M.D., Physician at The Bradford Royal Infirmary; 116, Manningham Lane, Bradford.

1905 Cuff, Archibald, Surgeon at The Royal Infirmary, and Assistant-Surgeon at The Children's Hospital, Sheffield; 285, Glossop Road, Sheffield.

1904 Curl, Sydney Walter, M.D., 58, Crouch Street, Colchester.

1902 Curtis, Henry J., B.S., late Surgeon at The Royal Hospital for Women and Children; late Surgeon at The North-Eastern Hospital for Children; 58, Harley Street, W.

1901 Dawnay, Archibald Hugh Payan, Anæsthetist at The Royal Orthopædic Hospital; 126, Harley Street, W.

O.M. Deas, Frank, Thorndale, Merton Park, S.W. (C. 1905–6, 1906–7.)

Elected

O.M. Dent, Clinton T., M.C., Surgeon at St. George's Hospital and Consulting-Surgeon at The Belgrave Hospital for Children; 61, Brook Street, W. (C. 1902–3, 1903–4, 1904–5.)

1901 Dodd, Arthur Herbert, 4, Ventnor Villas, Hove, Sussex.

1901 Douglas, Arch. R., Assistant-Medical Officer and Deputy Superintendent at The Royal Albert Asylum, Lancaster.

O.M. Drew, Douglas, B.S., Surgeon at The North-Eastern Hospital for Children and at The Hospital for Women, Soho Square; 6, Wimpole Street, W. (C.)

1905 Dudgeon, Leonard S., Superintendent of Clinical Laboratory, Bacteriologist and Lecturer on General and Special Pathology in the Medical School at St. Thomas's Hospital; 6, Powis Garden, Bayswater, W.

1901 Dun, Robert Craig, M.B., Surgeon at The Liverpool Infirmary for Children; 6, Rodney Street, Liverpool.

1901 Dunlop, James, Aveley, Purfleet, Essex.

1901 Dunn, W. J. Robertson, 46, Wellington Terrace, West Derby Road, Liverpool.

1906 East, C. H., M.D., St. Clare, Malvern.

1901 Edelsten, Ernest Alfred, M.B., 370, Brixton Road, S.W.

1904 Edmunds, Arthur, B.S., Assistant-Surgeon at The Paddington Green Children's Hospital; 30, Welbeck Street, W.

O.M. Edmunds, Walter, M.C., Surgeon at The Tottenham Hospital; 2, Devonshire Place, W. (C. 1900–1, 1901–2, 1902–3.)

1905 Elliott, Andrew, M.D., Medical Registrar at West London Hospital; 110, Gloucester Place, Portman Square, W.

1906 Elliott, Frank Percy, M.B., Medical Officer Walthamstow Public Dispensary; 113, Grove Road, Walthamstow.

1901 Ellis, W. McDonogh, M.D. (Travelling.)

1904 Emanuel, J. G., M.D., Physician to Out-patients at Queen's Hospital, Birmingham; 47, Newhall Street, Birmingham. (P.S.)

Elected

1905 English, T. Crisp, B.S., Assistant-Surgeon at St. George's Hospital, and at the Grosvenor Hospital for Women and Children; 31, Grosvenor Street, W.

1901 Evans, J. Howell, M.Ch., Assistant-Surgeon at The Cancer Hospital; 63, Grosvenor Street, W.

1901 Evans, Thomas Hy., 95, Shaw Street, Liverpool.

1904 Evelyn, William Arthur, M.D., Honorary Physician at the York County Hospital; 24, Micklegate, York.

O.M. Ewart, William, M.D., Senior Physician at St. George's Hospital and at The Belgrave Hospital for Children; 33, Curzon Street, Mayfair, W. (C. 1904–5, 1905–6, 1906–7.)

1901 Fisher, H. Wycliffe, "Rathescar," Greenbank Drive, Sefton Park, Liverpool.

O.M. Fisher, Theodore, M.D., late Pathologist at The Bristol Royal Infirmary, and late Physician to Out-patients at The Bristol Hospital for Sick Children; Assistant-Physician at The East London Hospital for Children; The Garples, Sidcup, Kent. (C. 1900–1.) (P.S. 1901–2, 1902–3, 1903–4.) (C. 1904–5.)

1906 Fitzwilliams, Duncan C. L., M.B., 64, Brook Street, W.

1906 Fordyce, A. Dingwall, M.B., Physician for Diseases of Children at Newtown Dispensary; 19, Coates Crescent, Edinburgh.

1901 Forster, Henry John, 119, Victoria Road, Romford, Essex.

1903 Fortescue-Brickdale, John Matthew, M.D., Registrar and Pathologist at The Royal Hospital for Children and Women, Bristol; 52, Pembroke Road, Clifton, Bristol.

O.M. Fox, T. Colcott, M.B., Physician for Diseases of the Skin at Westminster Hospital, and at Paddington-Green Hospital for Children; 14, Harley Street, W.

1905 Fox, W. S., 63, Grosvenor Street.

1907 Fraser, D. H., M.B., 319A, Brixton Road, S.W.

1901 *Frost, Edmund, M.D., "Chesterfield," Chesterfield Road, Eastbourne.

O.M. Fuller, Andrew, Local Government Board Inspector; "The Bushes," Chase Road, Oatlands Park, Weybridge, Surrey.

Elected

1906 Furber, Edward Price, Beechcroft, Oxted, Surrey.

1901 George, Alfred Walter, M.D., Surrey House, Shoot-up Hill, N.W.

1904 Gerrish, Daniel S., Coningsby Villa, 332, Church Road, St. George, Bristol.

1900 Gervis, F. Harcourt, M.D., 1, Lyncroft Mansions, West Hampstead, N.W.

O.M. Giffard, Henry Edward, Denham House, Egham.

1907 Gilford, Sidney, M.B., 136, Oxford Road, Reading.

1905 Goldsmith, G. Harvey, M.D., Ophthalmic Surgeon at Bedford County Hospital; Harpur Place, Bedford.

1906 Goodhart, James Frederick, M.D., Consulting-Physician at Guy's Hospital and at The Evelina Hospital for Children; 25, Portland Place, W.

1901 Grant, J. Dundas, C.M., Surgeon at The Central London Throat and Ear Hospital; 18, Cavendish Square, W.

O.M. Gray, Alexander C. E., M.D., 1, Elm Park Gardens, South Kensington, W. (C. 1906–7.) (C.)

1901 Gullan, Archibald Gordon, M.D., 37, Rodney Street, Liverpool.

O.M. Guthrie, Leonard George, M.D., Physician at The Hospital for Epilepsy and Paralysis, Regent's Park; Senior Physician at The Paddington-Green Children's Hospital; 15, Upper Berkeley Street, W. (C. 1900–1, 1901–2, 1902–3.) (C. 1904–5, 1905–6, 1906–7.)

1907 Haig, T. B., M.D., 88, Dalston Lane, N.E.

1904 Harman, N. Bishop, M.B., Ophthalmic Surgeon at Belgrave Hospital for Children; 108, Harley Street, W.

1907 Harvey, Alfred Wallace, North-Eastern Hospital for Children, N.E.

O.M. Hawken, Giles Lockwood Lang, Surgeon at St. John's College, Hurstpierpoint, Sussex.

1901 Hawthorne, Charles Oliver, M.D., Physician at The Central London Ophthalmic Hospital; Assistant-Physician at The Royal Hospital for Children and Women; 63, Harley Street, W. (C. 1905–6, 1906–7.) (C.)

1904 Haynes, G. Secretan, 4, Trinity Street, Cambridge.

Elected

1906 Hett, G. Seccombe, M.B., 16, Palace Gardens Mansions, The Mall, Kensington, W.

1901 Heywood, Charles Christopher, M.B., Physician at Manchester Children's Hospital and Assistant-Physician for Diseases of Children at Manchester Northern Hospital; Winter's Buildings, St. Ann Street, Manchester.

1907. Higgs, Frederick W., M.B., 18, Wellington Square, Chelsea, S.W., Assistant-Physician at the Belgrave Hospital for Children.

1904 Hill, G. Wm., M.D., Surgeon for Diseases of the Ear at St. Mary's Hospital; 26, Weymouth Street, Portland Place, W.

1902 Hinds, Frank, M.D., Honorary-Surgeon at The Infirmary, Worthing; 17, Tennyson Road, Worthing. (C. 1904–5, 1905–6.)

1901 Hobhouse, Edmund, M.D., Assistant-Physician at The Sussex County Hospital; Physician at The Royal Alexandra Hospital for Children, Brighton; 12, Second Avenue, Hove. (C. 1903–4), (C. 1905–6, 1906–7.) (C.)

1904 Hobson, H. Overton, M.D., 32, Upper Berkeley Street, W.

1905 Hollings, Guy B., M.D., 22, Endsleigh Gardens, N.W. (C.)

1907 Holmes, Thomas Edward, M.D., Rosendall, Redland Road, Bristol.

1907 Holtzmann, W. W., M.B., London Hospital, E.

1901 Hopkinson, Albert, M.B., 2, Parsonage Road, Withington, Manchester.

1905 Howard, J. Russell, M.S., Assistant-Surgeon at The Royal Waterloo Hospital for Women and Children; 10, Weymouth Street, W.

1901 Hutchison, Robert, M.D., Assistant-Physician at The London Hospital, and at The Hospital for Sick Children, Great Ormond Street; 22, Queen Anne Street, W. (C. 1901–2, 1902–3, 1903–4.)

O.M. Hutton, David Mount, M.D., 5, Lulworth Road, Birkdale.

O.M. Hutton, Henry Richmond, M.B., Physician at The Manchester General Hospital for Children; 16, St. John Street, Manchester. (C. 1903-4, 1904–5, 1905–6.)

1904 imThurm, Robert McKenzie, Ailsa, Sydenham.

Elected

O.M. Jaffrey, Francis, Surgeon at St. George's Hospital; Surgeon at The Belgrave Hospital for Children; 33, Nottingham Place, W. (C. 1901–2, 1902–3, 1903–4.) (S. 1905–6, 1906–7.) (C.)

1901 James, Charles Alfred, 49, Stamford Hill, N.

1905 Jessop, Edward, 81, Fitzjohn's Avenue, Hampstead, N.W.

O.M. Jessop, Walter Hamilton Hylton, M.B., Ophthalmic-Surgeon at St. Bartholomew's Hospital; 73, Harley Street, W.

1901 Johnson, L. Capper, Lidgate Park Road, Roundhay, Leeds.

1902 Johnson, Raymond, Surgeon at University College Hospital and at The Victoria Hospital for Children; 11, Wimpole Street, W.

1904 Jones, A. Ernest, M.D., 13, Harley Street, W.

1903 Jones, W. Llewellyn, M.D., 58, Thomas Street, Merthyr Tydfil, South Wales.

1905 Kellie, Kenneth H. A., M.B., Westfield, Curzon Park, Chester.

1902 Kelson, William Hy., M.D., Assistant-Surgeon at The London Throat Hospital; 17, Cavendish Place, Cavendish Square, W.

1907 Kidd, F. S., B.C., Surgical Registrar at The London Hospital.

O.M. Knapton, George, Leeswood House, Rhos, Ruabon, N. Wales.

1901 Lacy, Alexander Gairdner, "Saumarez," Sunninghill, Ascot, Berks.

O.M. Lambert, Sydney H. A., M.B., Gothic House, Harrow-on-the-Hill. (C. 1906–7.)

1901 Langdon-Down, Percival L., M.B., 47, Welbeck Street, W.

1900 Langdon-Down, Reginald Langdon, M.B., 47, Welbeck Street, W.

1905 Langmead, F., M.B., 74, Oxford Terrace, Hyde Park, W.

1907 Law, Edward, M.D., 8, Wimpole Street, W.

O.M. Lawson, Arnold, M.D., Assistant-Surgeon at The Royal London Ophthalmic Hospital, and Ophthalmic-Surgeon at The Children's Hospital, Paddington-Green; 12, Harley Street, W.

Elected

1905 Lee, H. E., M.B., 45, Carlton Hill, N.W.

O.M. Lee, Philip George, Surgeon at The Women and Children's Hospital, Cork; 25, St. Patrick's Hill, Cork. (C. 1906–7.) (C.)

1907 Leon, John F., M.D., Elmwood, Grove Road, Southsea, Hon. Assistant-Physician at The Royal Portsmouth and Gosport Hospital.

1901 Leslie, W. Murray, M.D., 74, Cadogan Place, Belgrave Square, S.W.

1904 Lett, Hugh, Ch.B., Assistant-Surgeon at The London Hospital and The Belgrave Hospital; 48, Queen Anne Street, W. (C. 1906–7.) (S.)

O.M. Lewis, Percy G., M.D., Honorary Medical Officer at The Victoria Hospital, Folkestone; 22, Manor Road, Folkestone. (C. 1903–4, 1904–5, 1905–6.)

1904 Lingard, Alfred, M.B., late Imperial Bacteriologist to the Indian Government. (Travelling.)

1901 Livingstone, George R., 35, George Street, Dumfries, N.B.

1905 Low, V. Warren, B.S., Assistant-Surgeon at St. Mary's Hospital; 146, Harley Street, Cavendish Square, W.

O.M. *Lucas, R. Clement, B.S., Senior Surgeon and Lecturer on Surgery at Guy's Hospital; Consulting-Surgeon at The Evelina Hospital for Sick Children; 50, Wimpole Street, W. (T.) (TT.) (W. 1903–4.) (C.C. 1905–6, 1906–7.)

1905 Maddox, R. H., M.B., Major I.M.S., Ranchi, Chota Nagpur, India; c/o Messrs. Thos. Cook & Sons, Ludgate Circus.

O.M. McCaw, John, M.D., Physician at The Belfast Hospital for Children; 74, Dublin Road, Belfast. (C. 1901–2.)

1904 McGregor, John, M.D.

1905 McIlraith, C. H., M.D., 44, Half Moon Street, Herne Hill, S.E.

O.M. McKenzie, Dan, M.D., Holly Lodge, Leytonstone.

O.M. McKerron, Robert Gordon, M.D., Senior Physician at The Children's Hospital, Aberdeen; 1, Albyn Place, Aberdeen. (C. 1902–3, 1906–7.) (C.)

1901 McNab, Alexander Anderson, M.B., 15, Wesley Road, Armley, Leeds.

Elected

1900 Macalister, Charles John, M.D., Physician at The Liverpool Royal Southern Hospital; 35, Rodney Street, Liverpool. (C. 1901–2, 1902–3, 1903–4.)

1907 Mackenzie, John Brurd, M.B., North-Eastern Hospital for Children, N.E.

1901 Mackintosh, John Stewart, St. Ive, Platt's Lane, Hampstead, N.W.

1901 Mackintosh, William Alexander, M.B., 3, Park Terrace, Stirling. (C. 1904–5.)

1901 Maitland, Alfred Derwent, 1, Gloucester Villas, Hanwell, W.

1904 Makin, Frank Humphrey, M.B., c/o 'South African Register,' 80, Fleet Street, E.C.

1901 Makins, George Henry, C.B., Surgeon at St. Thomas's Hospital; Consulting-Surgeon at The Evelina Hospital for Sick Children; 47, Charles Street, Berkeley Square, W.

O.M. Malcolm, John D., C.M., Surgeon at The Samaritan Free Hospital; 13, Portman Street, Portman Square, W.

1907 Mann, H. C. C., M.B., The College, Guy's Hospital.

1907 Mansie, J., M.B., 413, Kingsland Road, N.E.

1907 Manuel, Alexander, M.B., 2, Marlborough Gate, W.

O.M. Marshall, Lewis W., M.D., Surgeon at The Children's Hospital, Nottingham; 42, The Ropewalk, Nottingham. (C. 1900–1, 1901–2, 1902–3.)

1907 Mathews, Paul, M.D, Resident Medical Officer, St. Mary's Hospital, Manchester.

1900 May, W. Page, M.D., 9, Manchester Square, W.

1902 Maynard, J. Seymour, M.B., 4, Charles Street, St. James's Square, S.W.

1904 Midelton, William John, 72, Charminster Road, Bournemouth.

O.M. Milburn, Charles Henry, M.S., Surgeon at The Victoria Hospital for Children, Hull; 158, Anlaby Road, Hull.

1902 Miller, Charles Hewitt, Oughtrington House, Lymm, Cheshire.

Elected

1907 Miller, Reginald Henry, M.D., 22a, Cavendish Square, W.

1902 Milligan, Wyndham Anstruther, M.D., Registrar at The Hospital for Women, Soho Square; Pathologist at The North-Eastern Hospital for Children; 68, Park Street, Grosvener Square, W.

1907 Milne, James A., Her Majesty's Hospital, Stepney, E.

1901 Milne, Robert, M.D., 32, Bow Road, E.

O.M. Moline, Paul F., M.B., Anæsthetist at The Victoria Hospital for Children, Chelsea; 42, Walton Street, Chelsea, S.W.

1901 Monsarrat, Keith Waldegrave, C.M., Surgeon at The Northern Hospital, Liverpool; 11, Rodney Street, Liverpool. (C. 1904–5.)

1901 Montgomery, W. P., B.S., Surgeon at The Children's Hospital, Manchester, Assistant-Surgeon at The Manchester Royal Infirmary; 15, St. John Street, Manchester.

1906 Moon, Edward Gibson, High Beach, Victoria Parade, Broadstairs.

1907 Moore, James Lennox Irwin, M.B., 30a, Wimpole Street, W.

1901 Morgan, Cecil Augustus, M.B., 6, Gloucester Place, Portman Square, W.

1902 Morgan, George, Senior Surgeon at The Children's Hospital, Brighton; 6, Pavilion Parade, Brighton.

1901 Morison, Alexander, M.D., Physician to Out-patients at The Great Northern Central Hospital, and at The Children's Hospital, Paddington-Green; 14, Upper Berkeley Street, W. (C. 1903–4, 1904–5, 1905–6.)

O.M. Mossop, Isaac, Surgeon at The Bradford Children's Hospital; Victor Lodge, Manningham, Bradford. (C. 1906–7.)

1905 Mounsey, R. E., Moorlands, Camberley, Surrey.

1902 Mummery, John Percy Lockhart, B.C., 10, Cavendish Place, W., Assistant-Surgeon at The North-Eastern Hospital for Children. (C. 1904–5, 1905–6, 1906–7.)

1901 Munro, Henry Acland, M.B., "Lulworth," Rushey Green, Catford, S.E.

1904 Murphy, J. Keogh, B.C., Surgeon to Out-patients at The Paddington-Green Children's Hospital; 9, Weymouth Street, Portland Place, W.

Elected

1904 Nash, Elwin H. T., Oulton House, Burnley Road, Accrington, Lancs.

1901 Nash, W. Gifford, Surgeon at The Bedford County Hospital; Clavering House, Bedford.

1905 Neave, Sheffield, Assistant-Physician at The North Eastern Hospital for Children; Mill Green Park Ingatestone, Essex.

1902 Newbolt, George P., Surgeon at The Royal Southern Hospital, Liverpool; 42, Catherine Street, Liverpool.

1901 Nisbet, J. Tawse, M.D., 7, Croxteth Road, Liverpool.

1901 Niven, Robert, Camberwell Infirmary, Brunswick Square, S.E.

1906 Nix, Edward J., M.D., Physician at All Saints' Children's Hospital; 11, Weymouth Street, W.

1906 Odgers, P. N. Blake, B.Ch., Assistant-Surgeon at The Northampton Royal Hospital; 16, Castilian Road, Northampton.

1901 Oldmeadow, Lloyd J. H., M.D., Kineton, Warwickshire.

1901 Oppenheimer, Heinrich, M.D., 63, Finsbury Pavement, E.C.

1904 Orme, Gilbert Edward, B.C., Lowfield, Clitheroe, Lancs.

1901 Palmer, Frederick S., M.D., 27, Queen Anne Street, Cavendish Square, W.

1907 Parbury, W. K., Medical Officer of Health for Bedfordshire; Sharnbrook, Beds.

1906 Parker, Arthur Percy, B.Ch., Surgeon at The Radcliffe Infirmary, Oxford; 2, Holywell Street, Oxford.

O.M. Parkinson, J. Porter, M.D., Physician at The London Temperance Hospital and Physician at The North-Eastern Hospital for Children; 57, Wimpole Street, W. (C. 1903–4, 1904–5, 1905–6.) (S. 1906–7.) (S.)

1902 Parkinson, Thomas W., M.D., 77, Sloane Street, S.W.

1903 Parry, Robert H., Surgeon at The Victoria Infirmary and at The Royal Hospital for Sick Children, Glasgow; 3, Royal Crescent, Queen's Park, Glasgow. (C.) (1903–4.)

1907 Parsons, Leonard Gregory, M.B., 39, High Street, Bromsgrove, Worcestershire.

Elected

1901 Paterson, Alexander Gordon, M.D., South Lodge, Ascot, Berks.

1903 Pearson, S. Vere, M.B., Physician at Mundesley Sanatorium, Norfolk.

1906 Peatling, Albert Victor, M.B., Park View, High Street, Carshalton, Surrey.

1901 Pendlebury, Herbert S., B.C., Surgeon at The Royal Hospital for Women and Children, Assistant-Surgeon at St. George's Hospital; 44, Brook Street, W.

O.M. *Penrose, Frank, M.D., late Physician at St. George's Hospital and at The Hospital for Children, Great Ormond Street; Wick House, Downton, Salisbury, Wilts.

1901 Pernet, George, Assistant at the Skin Department, University College Hospital; 94, Harley Street, W. (C. 1903–4, 1904–5, 1905–6.)

1907 Perram, Charles Herbert, M.D., Assistant-Physician at The County Hospital, Bedford; 55, Bromham Road, Bedford.

1901 Perry, Herbert, M.D., Assistant-Physician at The General Hospital, Birmingham, Physician to Out-patients at The Children's Hospital, Birmingham; 54, Newhall Street, Birmingham. (C.1905–6, 1906–7.) (C.)

O.M. Peskett, A. W. Chalmers, M.B., 4, Clermont Road, Preston Park, Brighton.

1902 Phillips, Hugh, M.B., 28, Palace Court, W.

1905 Pike, Douglas R., M.B., Stalmine Lodge, Stalmine, Poulton-le-Fylde, Lancashire.

1904 Piper, Francis Perris, M.B., King's Leigh, Tankerton, Whitstable.

1901 Poland, John, Senior Surgeon at The Miller Hospital, Greenwich; Surgeon at The City Orthopædic Hospital; 2, Mansfield Street, W. (C. 1906–7.) (C.)

1902 Potter, Bernard Elwell, M.B., Resident Medical Officer at St. George's Dispensary, Hanover Square; 57, Park Street, W.

1901 Potts, William A., M.D., 160, Hagley Road, Birmingham.

1904 Powell, Hugh Falkenberg, 1, Seagrove Place, Pittville, Cheltenham.

1904 Poynton, Frederick J., M.D., Assistant-Physician at University College Hospital, and at The Hospital for Sick Children, Great Ormond Street; 1, Harley Place, Harley Street, W. (C. 1906–7.) (C.)

Elected

O.M. *Prangley, Henry J., Tudor House, Anerley, S.E

1901 Pratt, Eldon, M.D., Henfield, Sussex.

1901 Pritchard, George Eric Campbell, M.D., 14, Cromwell Place, South Kensington, S.W.

1901 Quennell, Arthur, Brentwood, Essex.

1905 Randall, Martin, M.D., The Lodge, Leopold Road, Wimbledon, S.W.

1901 Raw, Nathan, M.D., Mill Road, Liverpool.

1901 Ray, John Howson, Ch.M., Assistant-Surgeon at The Salford Royal Hospital; Surgeon at The Children's Hospital, Pendlebury; 11, St. John Street, Manchester.

1901 Rendel, Arthur Bowen, M.B.

1901 Rhodes, John Milson, M.D., Didsbury.

1905 Richardson, William G., B.S., Assistant-Surgeon at Newcastle-on-Tyne Royal Infirmary; 19, Saville Row, Newcastle-on-Tyne.

1903 Ridley, J. Brooke, M.D., 32, Sydenham Road, Croydon.

1906 Roberts, Charles, M.B., Surgeon at The Manchester Children's Hospital; 15, St. John Street, Manchester.

O.M. Robinson, Henry Betham, M.S., Assistant-Surgeon at St. Thomas's Hospital and Surgeon at The East-London Hospital for Children; 1, Upper Wimpole Street, W. (C. 1901–2, 1902–3, 1903–4.)

O.M. Rogers, Bertram, M.H., M.D., Physician at The Hospital for Sick Children and Women, Bristol; 1, Victoria Square, Clifton, Bristol. (C.)

1901 Rose, Samuel Frank, Assistant-Surgeon at The National Dental Hospital; Dental-Surgeon at The North-Eastern Hospital for Children; 25, Weymouth Street, Portland Place, W.

O.M. Roth, Bernard, Orthopædic-Surgeon at The Royal Alexandra Hospital for Children, Brighton; 38, Harley Street, W.

1902 *Roxburgh, Alex. Bruce, B.Ch., Surgeon at The Poplar Hospital, and Assistant-Surgeon at The London Hospital; 7, Henrietta Street, Cavendish Square, W.

1901 Rumboll, Sydney, Cavendish House, Leeds.

Elected

1904 Sale-Barker, Horace John Maurice Drummond, Medical Officer in Charge X-ray and Electrical Departments at Westminster Hospital; 45, Hill Street, Knightsbridge.

1904 Sawyer, James E., M.D., Casualty Assistant Physician at The General Hospital, Birmingham; Physician to Out-patients at The Children's Hospital, Birmingham; 93, Cornwall Street, Birmingham.

1904 Scofield, H. C. Lingham, M.B., "Northwood," Dulwich Grove, North Dulwich, S.E.

1904 Scott, W. J., M.B., Clifton House, Sheet Street, Windsor.

O.M. Shuttleworth, George E., M.D., late Medical Superintendent Royal Asylum for Imbeciles, Lancaster; Medical Examiner defective children, Willesden School Board; Medical Expert (Metropolitan Asylums Board) Rochester House Inst., Ealing; 27, New Cavendish Street, W. (C. 1900–1, 1901–2, 1902–3.)

1901 Simson, Henry J. Forbes, 36, Grosvenor Street, W.

1901 Skelding, Henry, B.C., Surgeon at The Bedford County Hospital; St. Loyes, Bedford. (C. 1904–5, 1905–6.) (P.S.) (C.)

1907 Smallwood, E., The Bays, Knight's Hill, West Norwood.

1901 *Smith, Frederick John, M.D., Physician at The London Hospital; 138, Harley Street, W.

1901 *Smith, Travers, R.M., M.B., 13, Kilburn Park Road, N.W.

1904 Smith, William R., M.D., Professor of Forensic Medicine at King's College, London; 74, Great Russell Street, Bloomsbury Square, W.C.

1901 Smyth, Sidney B., M.B., Physician at The Hospital for Sick Children, Belfast; Ulsterville House, Lisburn Road, Belfast. (C. 1903–4.)

O.M. Spokes, P. Sidney, Dental-Surgeon at University College Hospital; 4, Portland Place, W.

1903 Spriggs, Edmund Ivens, M.D., Assistant-Physician and Lecturer on Pathological Chemistry at St. George's Hospital, Assistant-Physician at The Victoria Hospital for Children and at The City of London Chest Hospital; 48, Bryanston Street, Portman Square, W.

1904 Spurway, John, M.B., 79, Brondesbury Road, Kilburn, N.W.

Elected

1901 Staveley, William H. C., 24, Sloane Gardens, S.W.

O.M. Stephenson, Sydney, C.M., Ophthalmic-Surgeon at The Evelina and The North-Eastern Hospitals for Children; Editor and Founder of 'The Ophthalmoscope': 33, Welbeck Street, W. (S. 1900–1, 1901–2, 1902–3.) (C. C. 1903–4, 1904–5.) (C. 1905–6.)

O.M. Stewart, Hugh M., M.D., "Dyffryn," 123, Thurlow Park Road, Dulwich, S.E.

O.M. Stiles, Harold J., C.M., Surgeon at The Royal Edinburgh Hospital for Sick Children; 8, St. Colme Street, Edinburgh. (C. 1900–1, 1902–3, 1903–4.)

O.M. Sunderland, Septimus P., M.D., Physician at The Royal Hospital for Children and Women; Obstetric-Physician at the French Hospital; 11, Cavendish Place, W.

O.M. Sutherland, George A., M.D., Physician at The Paddington-Green Children's Hospital; Assistant-Physician at The North-West-London Hospital; 73, Wimpole Street, W. (C. 1900–1, 1901–2, 1902–3.) (S. 1903–4, 1904–5.) (C. 1905–6, 1906–7.) (C.)

1904 Swainson, James Midleton Graham, Assistant-Surgeon at The North-Eastern Hospital for Children.

1907 Tallent, J. H., M.B., Walton Lodge, Chislehurst, Kent.

1901 *Targett, James H., M.S., Assistant-Obstetric-Surgeon at Guy's Hospital; 19, Upper Wimpole Street, W.

1901 *Taylor, Frederick, M.D., Consulting-Physician at Guy's Hospital; Consulting-Physician at The Evelina Hospital for Sick Children; 20, Wimpole Street, W. (C. 1901–2, 1903–4.) (W. 1906–7.) (TT.)

O.M. Taylor, James, M.D., Physician at The National Hospital for Paralysed and Epileptic, Queen Square, and Physician at The North-Eastern Hospital for Children; 49, Welbeck Street, W. (C. 1901–2, 1902–3, 1903–4.)

1906 Telford, E. D., Surgeon at The Children's Hospital, Manchester; 8, St. John Street, Manchester.

1905 Telling, W. H. Maxwell, M.D., Assistant-Physician at The General Infirmary and Hospital for Women and Children at Leeds; Physician at The Leeds Infirmary; 29, Park Square, Leeds. (C.)

1901 Thorne, W. Bezly, M.D., 2, Harley Street, W.

Elected

1907 Thorpe, G. E. Knight, 6, Tafton House Road, Sheffield.

1901 Trout, J. H. Ensor, 412, Monument Road, Birmingham.

O.M. Tubby, Alfred H., M.S., Surgeon at Westminster Hospital; Consulting-Surgeon at The Evelina Hospital for Sick Children; Surgeon at The National Orthopædic Hospital; 68, Harley Street, W. (C. 1900–1, 1901–2.) (C.C. 1902–3.) (C. 1904–5, 1905–6, 1906–7.)

1903 Tullis, George Augustus, M.D., Denstone, Christ Church Road, Winchester.

1901 Turnbull, George Lindsay, M.D., 76, Ladbroke Square, W. (C. 1906–7.) (C.)

1901 Turner, H. Stanley, "Balgownie," 211, Bridge Road, Battersea, S.W.

1904 Turner, Philip, M.S., Assistant-Surgeon at The Belgrave Hospital for Children; 8, St. Thomas's Street, S.E.

1905 Tyson, W. J., M.D., Physician at The Folkestone Hospital; 10, Langborne Gardens, Folkestone.

1902 Walker, J. W. Thomson, C.M., Assistant-Surgeon at The North-West London Hospital, Assistant-Surgeon at St. Peter's Hospital for Stone; 30, Queen Anne Street, W. (C. 1903–4, 1904–5, 1905–6.)

1901 Wallace, Joseph B., M.B., 117, North Side, Clapham Common, S.W.

1905 Wareham, Sidney James, Surgeon at St. Mary's Children's Hospital, Plaistow; Raymond House, Plasket Road, Upton Park, E.

1907 Warren, Richard, M.Ch., Surgical Registrar at The London Hospital; Assistant-Surgeon at the East-London Hospital for Children; London Hospital, E.

1901 *Weber, F. Parkes, M.D., Physician at The German Hospital, Dalston; Assistant-Physician at The North-London Hospital for Consumption; 19, Harley Street, W. (C. 1905–6.)

1902 Westmacott, Frederick H., Aural-Surgeon at the Manchester Children's Hospital, Pendlebury; 8, St. John Street, Manchester.

1901 Whipham, Thomas Rowland C., M.D., Physician at The Evelina Hospital for Children; Assistant-Physician at The Prince of Wales' General Hospital, Tottenham; 37, Park Street, W. (C.)

Elected

1906 White, Sinclair, M.D., Ranmore, Sheffield.

1901 Whitelocke, Richard H. A., C.M., Surgeon at The Radcliffe Infirmary, Oxford; 6, Banbury Road, Oxford. (C. 1901–2, 1902–3, 1903–4.) (P.S. 1904–5, 1905–6.) (C. 1906–7.) (C.)

O.M. Wilks, Joseph Henry, B.C., Surgeon at The Children's Hospital, Sheffield; "Fairfield," Sharrow, Sheffield.

O.M. *Williams, Dawson, M.D., Physician at The East-London Hospital for Children, Editor of 'The British Medical Journal'; 6, Catherine Street, Strand, W.C. (C. 1900–1, 1901–2.)

O.M. Williams, Edward Cecil, M.B., Physician to Out-patients at The Bristol Royal Hospital for Sick Children; 159, Whiteladies Road, Clifton, Bristol.

O.M. Willey, Charles H., C.M., Surgeon at The Sheffield Children's Hospital; Wostenholm Road, Sharrow, Sheffield. (P.S. 1900–1.) (C. 1901–2.)

1904 Wilson, Geoffrey R., Ongar, Essex.

O.M. Wilson, Kemlo R. M., M.D., Hanwell, W.

1905 Wilson, R. Mervyn, M.D., Surgeon at The Derbyshire Hospital for Sick Children; Estcourt, Kedleston Road, Derby.

1902 Wood, Edward, Stamford Lodge, Waverley Road, Enfield, Middlesex.

1901 Woods, John Francis, M.D., Medical-Superintendent at The Hoxton House Asylum, N.; 29, Queen Anne Street, W.

1901 Wright, Douglas, M.D., 229, Camden Road, N.

1902 Wright, George A., M.B., Surgeon at The Manchester Royal Infirmary; Surgeon at The Children's Hospital, Pendlebury, Manchester; 16, St. John Street, Manchester.

**** *It is requested that any inaccuracy or inadequate description in the foregoing list may be notified to the Honorary Editor of the Reports and also to the Senior London Honorary Secretary. Members will greatly facilitate the work of the officials by examining the entries occurring opposite their names.*

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REPORTS

OF

THE SOCIETY

FOR THE

STUDY OF DISEASE IN CHILDREN.

SESSION of 1906–7.

1. A CASE OF OSTEO-ARTHRITIS.

By T. R. WHIPHAM, M.D.

The patient is a girl, aged 13 years, whose parents are country bred and healthy. She has one healthy sister, aged 7 years. Her personal history is good, her only illness having been whooping-cough and an operation for the removal of tonsils and adenoids when she was six years old. There is no history of any joint affections in any of her relations.

She was quite well until last Christmas, when she began to suffer with pains in both wrists and hands, and in the course of the next month swelling of the joints was noticed. Subsequently the pains attacked both knees and ankles.

The onset of her illness is attributed to the fact that in the previous August she got wet through while spending a day in the country. At the end of January of this

year she had a fall on the back of the head, which was followed by pains in the occipital region and neck. These disappeared after a time, and no irregularity nor impaired movement can now be found in the spinal column, even with the aid of the X rays. The shoulder- and elbow-joints likewise appear normal, but the wrists,

Fig. 1.

metacarpo-phalangeal and first inter-phalangeal joints are considerably enlarged, and over either carpus, and especially over the left, there is cystic swelling of the synovial membranes. The hip-joints appear normal, but the knees, ankles, and metatarso-phalangeal joints of the feet are large. The greatest enlargements are seen in the wrists and hands, and there is considerable wasting of the forearm

and hand muscles (Fig. 1). Skiagraphs show no definite lesions in the joints themselves, and the enlargements appear to be in the synovial membranes and in the tissues around.

The viscera, urine, and reflexes are normal. There is no enlargement of the spleen, and only one slightly enlarged gland can be felt in the left axilla.

I look upon the case as one of osteo-arthritis, or arthritis deformans, occurring in a child, and similar in many respects to that exhibited to the Society by Dr. Sansom on April the 19th, 1901. It does not conform to the type of joint disease described by Dr. Still, as there is no enlargement of the spleen or lymphatic glands ; moreover, Still's type generally occurs before the second dentition. These cases of osteo-arthritis have, in my opinion, no relation to rheumatism, and in this instance, certainly, there is no history of such affection.

Two varieties of osteo-arthritis are met with, the first tending to be monarticular and affecting the larger joints. It occurs late in life as a rule, and is characterised by marked changes in the cartilages and bones and by the formation of osteophytes. The other, which is more frequently found in children, is more general, and affects the smaller joints in the first instance at all events. Its onset is more acute and its progress is more rapid. The X rays show no irregular bony changes. The swelling starts in the synovial membranes, and bone changes may occur later. The fingers, as a rule, are attacked early, and present spindle enlargements of the joints with stiffening, and, finally, contraction or deviation. It is to this class that I relegate the case which I have shown. The actual cause of the disease is unknown, but the sudden onset and rapid progress tends to support the theory that it is due to some infection from without.

As to treatment, I intend to keep up the patient's general health and apply massage and galvanism locally, and possibly also hot air baths.

(*Exhibited October the 19th*, 1906.)

Discussion.

The Chairman (Mr. Milner Burgess) (Harlesden) said that at the present time he had a child a little older than the present patient the subject of osteo-arthritis, and in that family there was a distinct history of rheumatism. She was the youngest child of eight or nine, and they all suffered from rheumatism. In her case there was slight dislocation of all the bones in the upper and lower extremities.

Dr. G. A. Sutherland said most practitioners were inclined to regard such cases as extremely chronic, and perhaps as incurable. His own experience with the disease had not been very fortunate, but three years ago he showed before the Society a girl who had all the appearance of being a case of chronic rheumatoid arthritis. There were no bony changes, but the ankles, the knees, the wrists, the finger-joints, the vertebræ, and the jaws were all affected at different times. There was no involvement of the heart, nor any evidence of the presence of rheumatism in the case, unless one was to regard—and he was not inclined to—erythema nodosum as an evidence of rheumatism. She was under treatment with a variety of drugs for three years, but none of them seemed to do any good, although they were combined with efforts to keep up the general health. But in the summer just ended she began to mend, and now had perfectly recovered, being able to run about and attend school regularly, though previously she had been absolutely crippled. Such complete recovery had not been common in his own experience.

Dr. Porter Parkinson asked whether Dr. Whipham thought there was any gonorrhœal infection, as that was one of the organisms capable of causing lesions like those described. He had seen many cases of adults with similar lesions in whom there was reason to suppose there had been a history of gonorrhœa. A gentleman who consulted him six months ago, came again a fortnight ago. His trouble was supposed to be rheumatoid arthritis, but he had an attack of gonorrhœa when sixteen years of age, and it was followed by what the patient thought was acute rheumatism three or four years later. But at that time the discharge reappeared. He had been suffering almost ever since from joint pains, and there was some enlargement of the joints. That gentleman treated himself by a method brought forward by Dr. Soltau Fenwick and himself (Dr. Parkinson), namely, the injection of a particular form of polyvalent serum, and his recent visit demonstrated the immense improvement which had taken place in his condition: he could jump about, whereas he had previously to go upstairs on his hands and knees. He intended to try the treatment on children with the condition, on the chance that it might be gonorrhœal

arthritis, which was apt to go unrecognised in the case of young patients.

Dr. T. R. Whipham, in reply, said there was no history of any vaginal discharge, nor was there any other abnormality in that region. The child had not yet begun to menstruate. As a rule, such cases did not do very well in his experience, but the case had only been a week or two under his care, so that he could not yet foretell what the ultimate result would be.

2. A CASE OF CONGENITAL DEFORMITIES.

By T. R. WHIPHAM, M.D.

The patient is a girl, aged 15 years, who has been deformed from birth. In stature she is small for her age. The deformity affects the left side. As will be seen in the accompanying photograph (Fig. 2) there is marked asymmetry of the face, all the bones on the left side being ill-developed, which causes a flattening of the cheek and a slight dropping of the lower eyelid, so that the palpebral fissure is rather wider than on the right. The pinna of the left ear is malformed, the helix being turned over and attached in the region of the tragus. The arch of the palate is abnormally high. The left shoulder has a higher elevation than the right, and the posterior part of the shoulder girdle is unduly prominent. The left arm is shorter than its fellow, and its muscular development is much less. The pectoral muscles on that side are also small. In front gaps can be felt in the regions that the second and fourth ribs normally occupy. Posteriorly there are considerable curvatures of the spine, the cervical region being bowed to the right, while the upper dorsal region is markedly curved to the left. As a result the first rib on the left side is at a higher level than on the right, and this causes the prominence of the shoulder-girdle just referred to. The left scapula is ill-developed (Fig. 3), and is higher on the thorax than the right, and

FIG. 3.

FIG. 2.

slightly rotated with the lower angle inwards; the infra-spinous portion is smaller, and the inferior angle is more rounded than on the right. The spine of the scapula corresponds in position to the superior border of the right bone, and the supra-spinous part is exceedingly small. The superior angle, however, is marked by a prominence, above which the first rib can be easily felt.

FIG. 4.—Skiagraph taken from behind. The vertical shadow in the lower part near the spinal column is due to a steel band in the patient's corsets.

The skiagraphs show the first rib on the left side well above the level of the clavicle (Figs. 4 and 5). According to Mr. Higham Cooper, the radiographer at the Evelina Hospital, the second rib takes an abnormal course downwards and joins the sternum midway between the first

and fifth, the third rib is rudimentary, and the fourth even more so. For my own part I incline to the belief

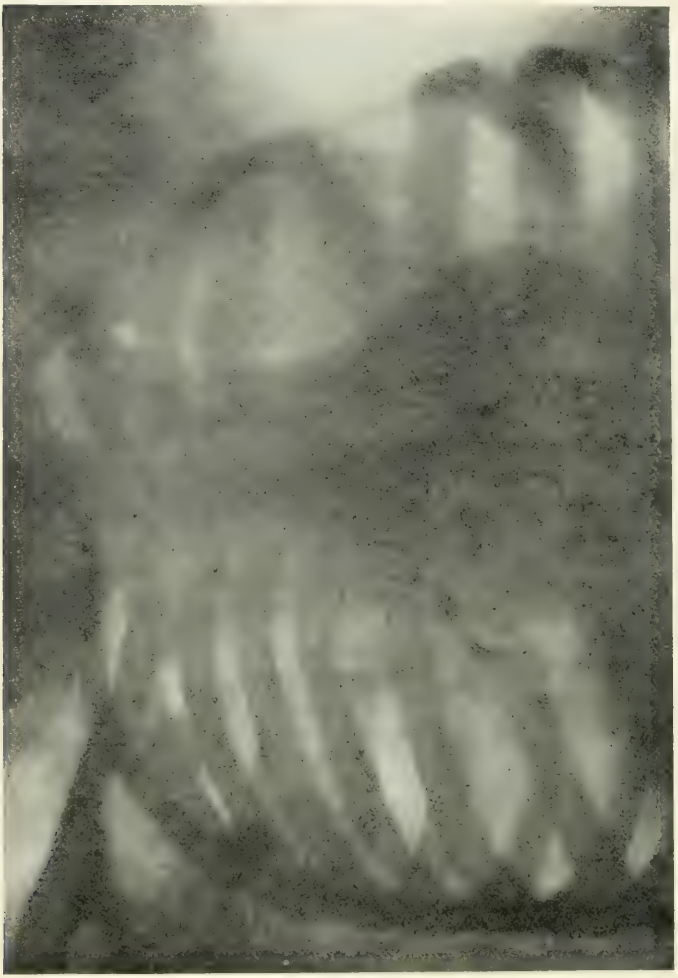

FIG. 5.—Skiagraph taken from the front.

that the shadow immediately above the left clavicle in the skiagraph taken from the front indicates a rudimentary second rib, that the rib which takes a sloping course

downwards is the third, and that the two elementary ones below that are the fourth and fifth. The sloping rib, I think, is more characteristic of a third than of a second rib, and arises, as I think a careful consideration of the skiagraph from the back will show, from the second and third dorsal vertebræ, though its slanting direction causes it apparently to articulate chiefly with the lower border of the second. The deficiencies mentioned account for the gaps in the front of the chest which I have already described. The lower ribs on the left side appear normal.

The muscles of the shoulder-girdle are considerably shortened, with the result that the scapula has very little play, so that the arm cannot be raised beyond the horizontal position, and that there is some torticollis present. The viscera appear normal. The condition I take to be due to some intra-uterine cause, a constrained position or something of that sort. The girl was a full-term child of a healthy mother, who was attended at her confinement from the Charity of the Lying-in Hospital, York Road. The labour is said to have been normal ; the only notes in the records of the Charity are brief, and to the effect that both the mother and the child did well. There is no history of any other abnormalities in the family. (*Exhibited October the 19th,* 1906.)

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3. A CASE OF CONGENITAL MALFORMATION OF THE HEART.

By T. R. WHIPHAM, M.D.

The patient is a baby, aged 10 months, and a female. She has been cyanosed since birth, and has frequent attacks in which the blue colour is extreme. In the family history there is nothing remarkable. The child herself is rather small, and in addition to the cyanosis presents clubbing of the fingers and toes. The hard

palate is rather high and the soft palate is completely cleft. The right side of the heart is enlarged, and on auscultation no murmur is audible, though the first sound is a little soft, but the most striking feature of the case is the great polycythæmia which exists. On September the 21st the red cells numbered 12,900,000 per c.mm. with 150 per cent. of hæmoglobin, and the leucocytes totalled 12,000. On October the 15th the red cells were 10,450,000 and the hæmoglobin 135 per cent. These counts were made by Mr. Leathem, the pathologist at the Evelina Hospital, and I have his assurance that the figures are correct.

Two forms of congenital malformation of the heart appear to be unassociated with a murmur, and these are : (1) An abnormal origin of the great vessels, which is hardly ever unaccompanied by other lesions, and (2) pulmonary atresia. The diagnosis of congenital lesions is notoriously often mere guess-work, and what is the defect in the present instance I am not prepared to state definitely, though I think that pulmonary atresia exists. That an increased number of the red cells is often found in the blood of cases with congenital cardiac defects is well known, but the number found in the case which I have brought before you to-day is very remarkable. The greatest number in a case of congenital morbus cordis that I have been able to find in the records is 9,800,000, and is reported by Fromherz, but Reinhold found 11,200,000 associated with carbon monoxide poisoning, the hæmoglobin in that instance being only 91 per cent. (*Exhibited October the 19th*, 1906.)

Discussion.

Dr. Edmund Cautley thought that in the present instance there was evidence of the presence of pulmonary atresia. He (Dr. Cautley) heard a murmur over the pulmonary area, a little further out than usual, and he suggested that there was atresia of the conus pulmonalis or considerable narrowing of the pulmonary orifice, so much so that the blood was not sent through it with sufficient force to produce a loud murmur. The right side of the heart he believed to be considerably hyper-

trophied. The condition was one which was usually associated with patent septum ventriculorum, but there was no murmur such as was often heard when the septum was patent. It was possible that that septum might be absent. The blood-count was certainly exceptionally high, and he thought the number of red cells in these cases depended on the degree of pulmonary obstruction.

Dr. T. R. Whipham, in reply, thanked Dr. Cautley for his opinion. Whether there was a murmur or not seemed doubtful; it was a matter of individual opinion. He agreed that the right side of the heart was enlarged, and he thought it probable that the case was one of atresia of the pulmonary artery.

Postscript.—The infant subsequently died; no post-mortem examination was obtained.

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4. TWO CASES OF HYPOSPADIAS IN BROTHERS.

By W. MILNER BURGESS.

The brothers are aged respectively 8 and $2\frac{1}{2}$ years. Their parents were not related before marriage; there are no other children. Mother's father's uncle and cousin the same.

The mother's father's aunt states that on the maternal side the great grandfather's brother suffered from hypospadias and also the great grandfather's nephew. In the elder boy there were three openings at birth—one at the meatus and two in the penile urethra. As he did not pass urine for twenty-four hours, I tried to reach the bladder with a director-probe, but failing, I sent for a surgeon, but the infant passed urine without help before he arrived.

The surgeon, Mr. Swinford Edwards, passed a director-probe into the bladder by the lowest opening in a horizontal direction; I had failed to do so in a vertical direction. Mr. Edwards advised doing nothing until the infant was weaned. At about four years old Mr. Edwards saw him again, and decided against any operation.

During infancy he had penile erections, and from childhood he passed urine sitting on a chamber, but since going

to school he has made water standing up. He can pass urine with force. There is no incontinence and no wetting of the scrotum and perineum. His prepuce forms a kind of flap, which overhangs, but does not surround the glans.

In the case of the younger child I was not so anxious about micturition in his case after my experience with the elder boy.

This boy sits on a chamber to pass urine, though he can pass it standing; he gets penile erections. There is no incontinence, and no wetting of the scrotum and perineum. His prepuce also forms a kind of flap, which overhangs, but does not surround the glans. There are two important points in cases of hypospadias, viz. the function of micturition and the function of sexual intercourse.

The boys fulfil the first function, but I should like the opinion of members upon the second function, namely, the power of sexual intercourse.

The late Mr. Arthur Durham advised waiting until adult life for any operative treatment.

Sir F. Treves remarks that, "the curving of the penis renders micturition difficult and coitus impossible. If any operation be carried out, it should be made without delay. If the deformity can be corrected early the penis may, as growth proceeds, assume a very fair degree of development. If the condition has been left untreated until the patient has reached adult life, it had better be left altogether. The penis, if it could be straightened (and it is not always possible at a late period) would be found to be short, wasted, and stunted. . . ."

I have seen very few cases of hypospadias during twenty-eight years in middle-class practice, and I should advise against operative treatment.

(*Exhibited October the 19th*, 1906.)

Discussion.

Mr. R. Clement Lucas said there were records of many interesting cases occurring in the same family. The family

history which Mr. Burgess had put forward showed that it was an hereditary defect. Naturally, if exaggerated, it could not be traced through many generations, and any intermarriage of such families with cousins would in all probability bring about an extinction of the race. In the matter of operation they were most unsatisfactory. The only operation which he had found of service was to make use of the hooded prepuce. The operation which he had done in some cases, to lengthen the urethra and bring it further forward, was to button-hole the hooded prepuce, and make use of the skin over the lower part of the penis. In that way one was able to cover up the lower part of the urethra, and lengthen it. In one case which he did at the Evelina Hospital many years ago, where there was hypospadias reaching right down to the bladder, and complete incontinence, the covering of all the open and exposed mucous membrane by a large flap from the prepuce made the child comfortable, but did not, of course, stop the incontinence.

Mr. Lockhart Mummery said he would be in favour of operating on such cases when they were of an age sufficient to allow a reasonable chance of success. It was impossible to do much in the case of a child only a year or two old; he would wait until it was six or eight years of age. Operation could scarcely make things worse, and frequently it brought about great improvement. Though such children might have no difficulty with micturition, the question of sexual intercourse later should be considered.

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5. A RARE CONGENITAL DEFORMITY OF BOTH RADII.

By P. LOCKHART MUMMERY, B.C.

The patient is a girl, aged 7 years. Her parents are quite healthy, and her mother says that the labour was quite easy and normal. There is no history of any illness in early life.

The mother first noticed that the child was unable to turn her hands when about fourteen months old. At the present time she is quite unable to rotate the hands at all. Both hands are in the position of incomplete pronation, and it is impossible to get the palms to look forwards.

All the other movements of the hands and arms are quite normal. The child catches hold of things backwards,

Fig. 6.

and puts her hands to her mouth backwards; she can, however, feed herself quite well. On attempting to rotate the wrists one finds that there is just a shade of movement between the bones, and they can be felt to click together at their upper ends. The upper end of the radius can be

felt. The X-ray photograph (Fig. 6) shows that there is no upper epiphysis to the radius on either side, though the other epiphyses are normal. The upper ends of the radii terminate in points, and there is a marked bend in the upper end of each radius. The radius on both sides is exactly the same. The ulna is normal on both sides.

(*Exhibited October the 19th,* 1906.)

Discussion.

Mr. R. Clement Lucas said he had examined the case, and disagreed with Mr. Mummery's explanation. He did not think that the radius was in any way deformed, except in the delayed ossification of the upper epiphysis. He regarded the case as one of spastic contraction of the pronators. The radius was drawn round into a strongly pronated position. The skiagraph was entirely deceptive, because the skiagraph of a cartilaginous radius would show no shadow. But if examined carefully it was obvious that the head of the radius could be felt most distinctly in both arms. A pronated forearm was not at all an uncommon deformity. The pronators of the forearm were so much stronger than the supinators, that it required very little weakening of the nerve supply of the supinators to throw the arm into a pronated position. He believed that was what had happened in the present case. The pronators had overpowered the supinators, which, through some defective nerve force, were probably partially paralysed. With regard to treatment, he would do all he could to stimulate the supinators, forcibly but gently supinating the arm daily, and encouraging every possible movement. It was what one would expect if the radius did not perform its proper function, that its ossification would be delayed, and that would probably account for the lack of ossification in the upper epiphysis.

Mr. Lockhart Mummery, in reply, expressed himself as very interested in what Mr. Lucas had said, and he would certainly try what he suggested. Still, he did not understand from Mr. Lucas's explanation why it was not possible to supinate the hand on trying to move it. The bones appeared to lock together when any attempt at supination was made.

6. A CASE SHOWING BILATERAL CONGENITAL SINUSES OF THE LOWER LIP.

By H. S. CLOGG, M.S.

The child, aged 12 months, is the fifth of its parents, who themselves show no deformity and who were not related before marriage. The other children are free from abnormality, and no history can be obtained of any deformity occurring in the antecedents or other members of the family. The child has a severe degree of bilateral hare-lip and cleft palate, with a very prominent premaxilla. The latter has been bent backwards and the hare-lip operated upon. The interesting deformity is shown in the lower lip. Here on either side of the middle line is a papilla, and around this, in the form of a semi-circle on its mouth aspect, a groove. From this groove leads a sinus passing downwards under the mucous membrane for about a quarter of an inch and ending blindly. These sinuses converge slightly and from them issues some mucus.

This deformity of the lower lip appears to be one of great rarity. In the literature I have found reference to thirty-eight cases. It is interesting to note how it seems to run in the same family. It is recorded in a mother and four children (Demarquay); father and three children (Murray); grandmother, mother, and daughter (Richet); mother, son, and daughter (Sutton); brother and two sisters and maternal grandfather (Lincoln de Castro); child and grandfather (Ballantyne); mother and four children (Sympson).

Deformities, apart from the mouth, do not seem to be common. Associated deformities of the upper lip and jaw are extremely common. In one case described by Murray the lower lip was the only deformity, and in the case of Sympson no mention is made of the upper lip and palate, and so, presumably, these were normally formed. In the

other cases there appears to have been present some deformity of the upper lip, or palate, or both. Most frequently the deformity of the upper jaw is the complete bilateral hare-lip and cleft palate. Sometimes the palate is completely formed, but a hare-lip is present. Occasionally the palate is cleft and the upper lip normally developed.

The external appearances of this deformity vary somewhat in different cases. The most common condition appears to be the one shown in this case. Sometimes the papillæ are absent, and in such cases a groove, slit, or orifice is seen in the lip on either side of the middle line. Occasionally the papillæ are extraordinarily well developed, and occur as distinct protrusions which are capable of a considerable amount of movement (Woollcombe).

The sinus in the lip is invariably situated in that plane of the lip between the mucous membrane and the muscular portion. The sinus, as shown by those cases which have been operated upon, is lined with mucous membrane, and opening into it are numerous mucous glands. In one case recorded, which is very analogous but not exactly similar, in place of the two sinuses there was present one central cavity in the lower lip between the mucous membrane and muscular portions (Lannelongue).

The origin of these sinuses is one very difficult of explanation. They have been regarded as due to faulty coalescence of the intermandibular fissure. This does not explain their occurrence to one side of the middle line. The few cases recorded of clefts of the lower lip have been in the middle line. The idea that the lower jaw and chin are developed from three portions, two lateral and one central—the intermandibular portion—has been advanced to account for them. The sinuses, then, would occur from want of fusion of the lateral and central pieces. The most recent papers on the development of the lower jaw deny the presence of this intermandibular segment. Clinically there is no evidence of an intermandibular segment. If this were present why do not deformities

occur in the lower jaw and lower lip similar to those in the upper lip? The lower jaw in all these cases is well developed. The deformity can hardly, therefore, be considered as due to error in the development of the mandibular processes. It must be found in a faulty development of the lower lip. The nature of this error in development it is hardly possible to explain from our knowledge of embryology. It is suggestive that in the growth of the lip the two portions become differentiated, the one forming the musculo-cutaneous and the other the mucous part of the lip. An overgrowth of the one would explain the papillæ; an imperfect fusion of the two would explain the formation of the sinus.

(*Exhibited October the 19th*, 1906.)

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7. INFANTILE PARALYSIS RESEMBLING ERB'S TYPE OF PARALYSIS DUE TO LESIONS OF FIFTH AND SIXTH CERVICAL NERVES.

By LEONARD GUTHRIE, M.D.

Patient is a boy, aged 3½ years. He has paralysis and wasting of the right deltoid, biceps, brachialis anticus, and supinator longus muscles. The supra- and infra-spinati are affected to less extent. The sternal half of pectoralis major, the trapezii, scaleni, levator anguli scapulæ, rhomboids, teres major, and latissimus dorsi escape. The triceps is wasted but not paralysed. The supinator brevis is apparently unaffected.

He cannot abduct his arm from the side nor flex the elbow, nor supinate the forearm beyond a right-angle. With the exception of the supinator longus all the muscles of the forearm are intact, and also those of the hand, with the exception of the first dorsal interosseus muscles, which are wasted.

At thirteen months of age a small superficial abscess over

the right mastoid process was opened. No anæsthetic was used. Next night both arms were observed to twitch, and on the following morning the right arm was found to be paralysed. He was taken to a hospital, when a fracture in the region of the scapula was apparently diagnosed, although no history of injury or accident was forthcoming, for the arm was put up in a splint, on removal of which six weeks later the limb was found in its present condition.

The history suggests anterior polio-myelitis of the fifth cervical segment of the cord rather than direct injury to the fifth and sixth cervical nerves.

The wasted and paralysed muscles are those supplied chiefly by the fifth cervical nerve; those innervated by the sixth (namely latissimus dorsi and triceps) escaping.

(*Exhibited October the 19th,* 1906.)

8. TWO CASES OF ANÆMIA PSEUDO-LEUKÆMIA INFANTUM.

By J. PORTER PARKINSON, M.D.

The first of these two cases shows the improvement resulting from drug and X-ray treatment during four months in a marked case of this disease, and the great reduction in the size of the spleen and improvement in the blood count.

Edwin N—, aged $1\frac{10}{12}$ths years, was admitted into the North-Eastern Hospital for Children May the 25th, 1906. He was one of four children, the others being healthy and strong. He was breast-fed for eighteen months. The abdomen had always been large, but had swollen more during the previous three weeks. He was an anæmic child, with marked signs of rickets in the bones of the cranium and limbs. The muscles were ill developed and very flabby; he could neither stand nor walk, and had to

be supported when sitting. The heart and lungs were normal; the abdomen was large and tympanitic, except over the area of the spleen, which was much enlarged; extending downwards to the iliac crest and towards the right, just beyond the umbilicus, three notches could be felt in its anterior border. Upwards the dulness extended to the seventh rib in the mid-axilla. The liver appeared slightly enlarged, but was perhaps only pushed down by the rickety deformity of the chest. The pulse-rate was 140–150 to the minute, and its pressure was 108 mm. of mercury. Temperature varied from 101° F. on admission to normal. Weight, 16¾ lbs. There were no gastro-intestinal symptoms.

The blood count on May the 26th gave 2,416,000 erythrocytes, 200,000 leucocytes, and 45 per cent. of hæmoglobin.

The differential count showed 50 per cent. polymorphonuclears, 10 per cent. large mononuclears, 30 per cent. lymphocytes, and 3 per cent. eosinophiles. The child was given small doses of arsenic, and the X rays were employed over the spleen three times a week for about ten minutes at a time.

The general condition improved slowly and the muscles were massaged daily.

On August the 28th the blood count showed 3,500,000 erythrocytes, 7000 leucocytes, and 50 per cent. hæmoglobin; the differential count being polymorphonuclears 65 per cent., large mononuclears 5 per cent., lymphocytes 20 per cent., eosinophiles 15 per cent.

Other counts in the interval showed a progressive diminution in the leucocytosis. During this time the spleen had gradually shrunk till at present it is less than half the size it was in May, and with that the child's general condition has much improved; it has gained 3 lbs. in weight and is able to stand, though it cannot walk unassisted.

The second case is a girl, aged 1½ years, admitted into the London Temperance Hospital, June the 26th, 1906.

She was breast fed for a month, after which cow's milk and Nestlé's milk were given, and recently bread and butter and eggs. The abdomen had been swelling for three months.

On admission the child was undersized, wasted, anæmic, and markedly rickety. The abdomen was much enlarged. The spleen could be felt reaching downwards as far as Poupart's ligament, and crossing the middle line as far as $1\frac{1}{4}$ inches to the right of the umbilicus; there were two notches felt in the anterior border. The lower edge of the liver reached to an inch above the level of the umbilicus. There was no acites. The lungs and heart were normal. There was slight enlargement of the superficial lymphatic glands in the groins and axillæ. The blood count was imperfectly registered, but there were 30,000 leucocytes in the c.mm. of blood with increase of eosinophiles and several nucleated red corpuscles seen.

The child had a normal temperature on admission, but a week later it rose, with signs of pneumonia at the apex of the right lung; this, however, subsided, leaving the child much weaker. In July a few purpuric patches appeared on the forehead and limbs; on July the 24th the blood was again examined, with the following results: 26,000 leucocytes, 41 per cent. polymorphonuclears, 38 per cent. lymphocytes, 14 per cent. large mononuclears, 1 per cent. eosinophiles, 0·6 per cent. basophiles, 5·3 per cent. myelocytes, the chief increase being large mononuclears, lymphocytes, and myelocytes.

The child has been treated with iron, arsenic, raw meat-juice, eggs, etc., but has not had the benefit of the X-ray treatment. (*Exhibited October the 19th*, 1906.)

Discussion.

Dr. G. A. Sutherland asked how many exposures to X-rays were given, and what their duration was.

Dr. Porter Parkinson, in reply, said he did not mention the number of red cells in the second case because they were the same as in the first—two and a half millions when the child first

came under notice, and three and a half millions at the present time. The leucocytes, however, differed very much in the two cases. The X rays were used three times a week, ten minutes' exposures on each occasion. At the end of two months it was interrupted for a fortnight. The exposures were not always over exactly the same area, so as to avoid skin troubles. There were no bad effects from the procedure, either to patient or operator.

9. A CASE OF PERSISTENT ALLORRHYTHMIA.

By ALEXANDER MORISON, M.D.

The patient, a boy, aged 8 years, since he had been under observation suffered from arrhythmical action of the heart, but the type of the arrhythmia had been of that rhythmical sort to which some have applied the term "allorrhythmia"—that is to say, another rhythm than the average normal. It was characterised by the occurrence at intervals of an "extra systole" and long pause. It did not seem to incommode the child. There was no other cardiac abnormality. He had obtained the history of intermittent action of the heart in early childhood in a case in which the heart, without any valvular defect, became a source of disablement in later life, but this was not the invariable experience. The mechanism of the phenomenon was quite clear, but its essential cause was not so evident. (*Exhibited October the 19th*, 1906.)

Discussion.

Dr. C. O. Hawthorne desired to mention a case bearing on the prognosis of such a condition. It tended to bear out the suggestion that the condition was compatible with a number of years of active life. The patient was now twenty-six years of age, and the irregularity of the heart's action could be traced to overstrain at football when at school, yet his general health was good. Last year he passed through a very severe attack of enteric fever, from which he made a good recovery, but the heart irregularity still continued.

10. A CASE OF HABIT-SPASM.

By G. A. SUTHERLAND, M.D.

A case of habit-spasm in a boy, aged 6 years, was shown. The movements consisted of (1) blinking of the eyes, (2) twisting the mouth, (3) jerking out the tongue, (4) jerking the head, (5) jerking the right shoulder, and (6) occasionally throwing out his legs and arms. In addition he made curious laryngeal sounds at times. No history of rheumatism or chorea. Nervous temperament. At the end of ten months the condition showed no improvement. (*Exhibited October the 19th,* 1906.)

Discussion.

Dr. Edmund Cautley said he was glad to hear that Dr. Sutherland had at last had a case of the condition which he could not cure. Some cases persisted for a long time, and he thought the chief reason for that was that they were not treated efficiently. It was childish to think of curing a bad case as an out-patient; the only hope lay in sending the patient away from home in charge of a competent nurse into the country, where a quiet, regular life should be led. Or the patient should be put under a course analogous to the Weir-Mitchell treatment, combined with tonics. The present patient did not look as if he had been very successfully treated so far.

Dr. Porter Parkinson said that sometimes the spasms started reflexly from a local lesion. A few days ago he saw a child who had well-marked habit-spasm, consisting chiefly in opening the mouth widely, uttering a curious sound, and at the same time partly shutting the eyes. He was found to have enlarged tonsils, which got inflamed every now and then, and it was likely that the movements were intended to get rid of the uncomfortable feeling at the angle of the jaw. Therefore one element in treatment should be to get rid of any abnormality. In his case the tonsils had been removed.

Mr. Sydney Stephenson said that every ophthalmic surgeon was familiar with a class of habit-spasm which affected children between the ages of three and ten, and which consisted either in closing the eyes and drawing up the angle of the mouth, or in a series of blinking movements. In many of the cases the cause

was a reflex irritation from the eyes produced by some error of refraction. He had so frequently seen cases cured by the provision of proper glasses, or even by the use of atropine, that he was convinced that the two things were connected as cause and effect. He had at present under care a Jewish child —of course neurotic—who came suffering from that form of habit-spasm. He prescribed glasses, which had the immediate effect of doing away with the spasm. He occasionally saw the patient, and he had only to lift his glasses to cause the entire symptoms to come back, and on replacing the glasses they stopped. Not long since a case of the kind was referred to him at the Evelina Hospital. He pointed out that it was an instance of habit-spasm, and not of chorea, as had been suspected, and that he proposed to do away, as far as he could, with any reflex irritation by placing a drop of atropine into each eye. That was done, and when the pupils were fully dilated the symptoms disappeared. Therefore, the influence of a reflex source of irritation in such cases could scarcely be exaggerated.

Dr. T. R. Whipham asked whether the spasm in this case began in any particular group of muscles, and spread from that. With regard to the case in which Mr. Stephenson had mentioned that atropine had caused a sudden cessation of the twitching, glasses had considerably improved the patient, but the spasm was not entirely removed.

Dr. G. A. Sutherland, in reply, said the spasm began in the usual way with what the mother described as grimacing, consisting chiefly of blinking of the eyes and slight movements of the nose and mouth. There had been a very great extension of the trouble. One day one movement seemed to predominate, and on another day another. Of course one inquired into the possibility of reflex irritation, and it was known that in some cases the use of proper glasses rectified the trouble, but in his experience that was true only of the slighter cases, in which the spasm was limited to the eyelids. The present child had hypermetropia, and a month ago Mr. Lawson examined her and ordered glasses, which had been worn ever since, but the spasm had not been improved. A common movement in such children was a jerking of the head backwards, and that was present in this child when he first saw it; and he found a tight article of clothing round the neck. That was put right, and although the clothing had been loose ever since there was no improvement in the spasm.

11. A PECULIAR DEFORMITY OF THE ORBIT.

By SYDNEY STEPHENSON, C.M.

Robert K. W—, aged $6\frac{4}{12}$ths years, was seen at the North-Eastern Hospital for Children on May the 24th,

Fig. 7.

1906, having been referred to the ophthalmic department by Dr. Theodore Fisher, then pathologist to the hospital. The lad's eyes, as shown by the photograph, presented a remarkable appearance (Fig. 7). The palpebral fissure, which in the left eye was of almost quadrangular shape, was directed downwards and outwards, exposing more of the eyeball than is customary. The eyelids could be closed

voluntarily. The upper puncta lacrymalia were present and patent, but no trace could be found of the lower ones. No dermoid growths were present in connection with the conjunctiva. On passing the finger along the lower border of the orbits, the malar bone, and the nasal process of the superior maxillary bone felt to be rough and unfinished, as it were. The eyes were hypermetropic to the extent of 5 D. The fundus oculi manifested no peculiarities, congenital or otherwise. The only associated deformity disclosed by a careful general examination of the patient was a diaphragm occluding the left external auditory meatus. The tick of a watch, however, could be heard on that side by osseous conduction. The boy, who was bright mentally, weighed 38 lbs., and his height was 43½ inches. He was the youngest of three children, and was born at term without instrumental aid. There was no history of deformities in other members of the family. The condition of the eyes and ear dated from birth.

An X-ray examination, undertaken by Dr. C. Nolan, clearly showed a deficiency of the orbital process of the superior maxillary bone. In other respects the superior maxillary bones appeared to be normal, inasmuch as the permanent teeth were well developed.

(*Exhibited October the* 19*th*, 1906.)

12. A CASE OF CEREBRAL DIPLEGIA.

By C. O. HAWTHORNE, M.D.

A case of cerebral diplegia in a boy, aged 5 years, was shown. The spastic condition was most marked in the right lower limb, but an exaggerated knee-jerk and an extensor response were present on both sides. The left upper limb was approximately normal, and the right

showed clumsiness of movement rather than spasticity. Though the boy could not talk he was considered by the parents to be quite "sharp," and he certainly appeared to understand whatever was said to him. He was a first child, and was born at full-time, the delivery being effected by instruments. There was no deformity of the skull, and the fundus oculi on each side was normal. The boy had never had any form of "fit." A younger brother was in every respect a normal and healthy child.

(*Exhibited October the* 19*th*, 1906.)

13. A CASE OF COLOBOMA OF THE IRIS, CHOROID, AND OPTIC DISC.

By C. O. HAWTHORNE, M.D.

In demonstrating this case the exhibitor referred to a patient whom he had shown to the Society in 1902 with a similar condition in both eyes (see 'Reports,' vol. iii, p. 27). In the present case the coloboma affected the right eye, the left eye was normal, and there were no congenital peculiarities in any other part of the body. (*Exhibited October the* 19*th*, 1906.)

14. AN INFANT WITH AN EXTREME DEPRESSION OF THE LEFT HALF OF THE FRONTAL BONE ATTRIBUTED TO THE USE OF FORCEPS DURING DELIVERY.

By C. O. HAWTHORNE, M.D.

The patient was a weakly-looking infant showing an extensive saucer-shaped depression involving the left half of the frontal bone. The exhibitor asked whether an operation should be advised; opinions in favour of this course had been expressed.

(*Exhibited October the* 19*th*, 1906.)

15. A CASE OF MULTIPLE LUPUS VULGARIS.

By GEORGE PERNET.

A case of multiple Lupus vulgaris in a boy, aged 5 years, was shown. The disease had been present two to three years. There were three foci of disease, viz. the elbows and the face.

(*Exhibited October the 19th*, 1906.)

16. PSORIASIS IN CHILDHOOD.

By JAMES BURNET, M.D.

Many diseases are found to pass through a series of developmental phases as we trace them from their incidence in early childhood through adolescence into manhood and womanhood. No better example can be found to illustrate this fact than rheumatism. In childhood we find little or no affection of the joints, whereas this feature becomes superadded as adult life is reached. So, too, I believe it is to a large extent with the disease commonly known as psoriasis. There has all along been a tendency to regard this common skin affection as similar, no matter at what period of life it is met with. True, the disease is the same so far as nomenclature goes, no matter when it occurs, but its appearance, and I believe also its ætiology, are by no means identical in childhood and in adult life. At present we are more immediately concerned with its occurrence in childhood, and I now wish to place before you very briefly a statement of my personal observations regarding this disease as it is met with in children.

In the first place, its incidence before the fifth year must be indeed rare, if it actually does occur before that period. I incline to the belief that cases so designated during an earlier period may have been wrongly diagnosed.

There is always a danger lest we mistake eczema, which is extremely common during infancy and before the age of five, for psoriasis. Again, the form it assumes in childhood is much more frequently the punctate variety than is the case in the adult form of the disease. Indeed, I have time after time found children suffering from psoriasis who showed only a few small typical spots on the back or chest. Altogether I think we must admit that in children the eruption is neither so fully developed nor yet so widespread in its distribution as it is in the adult. On this account I feel perfectly convinced that many cases of psoriasis occurring in young people are diagnosed as eczema, and that consequently an erroneous impression is often created as to the real source of the disease. I have rarely observed the diffuse form of the disease in children, and even then it was never so generalised or so scaly as in the adult.

It is, however, the ætiology of psoriasis to which I wish more particularly to refer. Some time ago I stated that psoriasis in children was very often rheumatic. I should like now to go a step further and say that every case of psoriasis in the child is due to rheumatism. I know such a statement directly contradicts the views of dermatologists. We must, however, deal with facts, and with all due deference to skin specialists we must presume that those who take a special interest in the diseases of children are better able to judge as to the origin of diseases and diseased processes met with during early life. It may be asked, can you bring forward any definite proof as to the rheumatic origin of the psoriasis of childhood? Before attempting to do so, let me remind you that as pediatrists we recognise many symptoms of rheumatism which skin specialists and others may never even think of. Of these I would specially mention sore throat, "growing" pains, nervousness, so-called "debility" (often synonymous with rheumatism in the child), and, lastly, those slighter cases of dilatation of the heart which naturally no skin specialist is likely to detect. Then, again, we must remember that

even when a history of rheumatism is inquired for, too often none is obtained simply because the parents or friends are not carefully cross-examined on the subject by the physician. Personally, when I find a child suffering from psoriasis, I examine the heart and throat very carefully and inquire for growing pains and all the other evidences of rheumatism. Where these are negative I then inquire regarding the family history, and am never content with an indefinite answer. Many people suffer from the effects of rheumatism and yet are unaware that this was the cause. It therefore requires great patience and a great deal of careful investigation on our part before we can dismiss the history of the patient's case as being negative so far as rheumatism is concerned.

As a result of my inquiries I have so far been able to satisfy myself that in the greater number of instances the psoriasis was in reality merely a rheumatic manifestation. Of special interest and importance are two cases of this disease to which I must now refer very shortly. The first is the case of a girl, aged 10 years. She came of rheumatic parentage and was an extremely nervous child. She had had an attack of acute rheumatism three years previously. When I saw her she was suffering from punctate psoriasis chiefly of the back, arms, and legs. A week later she began to manifest the signs of chorea, and developed a well-marked organic systolic mitral murmur. The chorea proved very intractable and progressed under treatment in anything but a favourable way. The other case is that of a girl, aged 12½ years. She suffered from fairly extensive psoriasis, and after being almost cured of this developed tonsillitis, with marked pains in the legs, dilatation of the heart, and a distinct blowing murmur in the mitral area which could be traced into the left axilla. I admit that these cases are but two in number, but I cannot reconcile the very close association of the psoriasis and chorea on the one hand and of the psoriasis and acute rheumatism on the other, both, be it remembered, with cardiac involve-

ment, unless we take it that the origin of the psoriasis was truly rheumatic in both cases. I am satisfied in my own mind of the real causal relationship between the psoriasis of childhood and rheumatism, even if there are those who remain sceptical as to my views.

Now a word or two as to the treatment of psoriasis. The usual method adopted is to prescribe an ointment, say, of chrysarobin or of tar, and perhaps in addition a course of alkaline baths. Arsenic, too, is very often given internally at the same time. If, however, as I contend, psoriasis is merely one of the many rheumatic manifestations of childhood, then surely something more becomes necessary. In every case, I maintain that we must not only cure the skin lesion, but we must go a step further, and endeavour, if possible, to eradicate the disease of which it is but an external evidence. Accordingly, in every case of psoriasis presenting itself for treatment I give as large doses of salicylate of sodium (or preferably aspirin) as will be tolerated by the child. This, I maintain, is the only rational treatment, and the only one which will succeed, if this be possible, in preventing the recurrence of the disease in later life. Of course alkaline baths and ointments of tar, etc., are useful additional measures, but they are not nearly so important as the salicylate treatment. I have heard physicians boast that they could always cure their cases by means of arsenic, and I do admit that they succeed, and that often rapidly, in getting rid of the skin lesion ; but what of the underlying constitutional tendency to rheumatism ? This has not been affected in the slightest, and accordingly the physician has failed in large measure in his treatment of the *patient,* for we must remember in all our therapeutic measures that not the mere disease must be dealt with, but the constitutional and other factors which lie behind it.

In conclusion, I wish to direct your attention to the following facts, which seem to bear out my contention that psoriasis in childhood is a genuinely rheumatic manifestation :

(1) Psoriasis is practically never seen before the age of five years. So, too, with rheumatism and chorea.

(2) When we go carefully into the history we find either a personal or a family tendency to rheumatism.

(3) It is often associated with other rheumatic manifestations.

(4) Cases can be cured by salicylate of sodium, which is essentially an anti-rheumatic remedy.

(5) Psoriasis is extremely apt to recur from time to time, and this is so also with rheumatism.

It may be that others have observed similar features with regard to psoriasis as it occurs in childhood, and if so I trust they will now be encouraged to place them on record, as only thereby will we gain an accurate knowledge of a disease over which so much difference of opinion seems to exist. (*Read November the 16th,* 1906.)

Discussion.

Dr. Porter Parkinson said that at one of the meetings of the Society in the last session, the question of the ætiology of psoriasis arose. At that time he mentioned two cases of his own in which the psoriasis occurred in children who had suffered from acute rheumatism, and suggested at that meeting, in a very tentative way, whether there might be some relationship between the two diseases. He had not noticed psoriasis in association with any other disease nearly so frequently as with rheumatism. At that time, therefore, which was before he knew anything of Dr. Burnet's work, he thought there might be some connection between the two.

Dr. E. I. Spriggs said he could bear testimony to the fact that psoriasis and rheumatism were sometimes associated in children. He had had under care for seven or eight years a medical student, who, from childhood, had had rheumatism and psoriasis, and was now suffering from mild endocarditis; but it had never occurred to him that there was any reason to suppose that the two conditions were associated.

The Chairman (**Dr. W. J. Tyson**) (Folkestone), said he would like to hear whether the disease as it affected adults was often found in the same patient as had been subject, at some time of his life, to rheumatism. He had himself been seeing out-patients for many years, but had never associated the comparatively rare cases of psoriasis in children with rheumatism,

nor had he done so in the case of adults. The paper was of considerable interest, because it gave a plan of treatment which in the two cases dealt with was beneficial. There was no evidence in the paper as to whether thyroid extract would have done good in those cases. Though two cases were scarcely enough on which to found any conclusions, the author had had the courage to suggest a cause, and to follow out a definite line of treatment.

17. A CASE OF HEMIPLEGIA OCCURRING IN AN EPILEPTIC AT FOUR YEARS OF AGE, WITH ATHETOSIS OF THE ARM.

By E. I. SPRIGGS, M.D.,

AND

F. W. HIGGS, M.B.

The boy, aged 9 years, had convulsions when teething and a definite epileptic fit at eighteen months, since when he has been subject to fits. He had whooping-cough and measles in infancy. At four and a half years his mother states that he had a fit in the night, and on the next day his left arm and leg were paralysed. The leg improved rapidly, and in two or three months he could get about. When first seen at the Victoria Hospital in July last, both arm and leg showed involuntary movements. At the present time there is left facial paresis, paresis of the muscles of the left arm and forearm, and to a smaller degree of the left leg. The left hand is subject to fairly regular, rhythmic, athetoid movements, by which the hand is extended, circumducted, and flexed. The athetosis is more marked during excitement and ceases during sleep. The tendon jerks are not obtained in the upper limb, but are exaggerated in the lower as compared with the healthy side. The left foot drags in walking. The electrical reactions of the muscles affected are normal. Some mental impairment is present.

Although paralyses which are acquired after birth are

often associated with some sort of exanthem, no history of the kind is found in the present case. It is uncommon for hemiplegia to arise during an ordinary epileptic fit, but this appears to have happened in the present instance.

(*Exhibited November the 16th,* 1906.)

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18. A CASE SHOWING DIVISION OF THE CLAVICLES INTO TWO HALVES, WITH OTHER BONY DEFORMITIES; CLEIDO-CRANIAL DYSOSTOSIS.

By E. I. SPRIGGS, M.D.

The subject of this note was brought to the Victoria Hospital in March, 1905, for dyspepsia, and my clinical assistant at that time, Mr. Harold Jäger, while examining the chest, called my attention to the condition of the clavicles, each of which was in two parts. The following is an account of the case:

F. S—, female, aged 12½ years. A rather thin child, of normal height for her age (4 ft. 8 in., or 142 cm.), with a large-looking head. Weight, 4 st. 8 lbs. (29 kilog.). The *family history* shows that the maternal grandfather died of Bright's disease and a maternal uncle of consumption. The mother had chorea when thirteen years old. One year after her marriage this child was born, and two years later a boy. After this second confinement the mother began to suffer from what was at first regarded as neurasthenia, and later as Bright's disease, but after six years was recognised to be myxœdema, for which she has been continuously and successfully treated since. Lately two other children have been born, aged respectively 3 and 2 years. The labours were all normal. The mother says that all the children except the patient are well developed, and this was so in one of them whom I have seen. The mother's bony system shows no deformity.

FIG 8.

Personal medical history.—The patient has not suffered from any other complaint than that for which relief was sought. Her father has frequently remarked that there was something wrong with the shape of her chest.

Present condition.—On examination of the child two little knobs are seen to present themselves beneath the skin at the centre of the clavicles. These two small rounded prominences are the contiguous ends of the two segments which compose the bone, and are freely movable upon one another but cannot be separated by pulling out the shoulder: there appears therefore to be a loose joint. The adjoining ends are enlarged; no definite ligament can be felt. Each half of the bone is 1½ inches (or 3·75 cm.) long. During rest the inner halves extend upwards and outwards from the sternum, and the outer downwards and outwards, so that they form a wide angled inverted V, thus ⋀. The sterno-cleido-mastoid and the pectoralis major are attached to the inner portion, the trapezius and deltoid to the outer. The shoulders fall together and the scapulæ project behind, a hollow being left between them and the spine. The impression given is, in the mother's words, that the child is very narrow chested.

The photograph shows the wide mobility permitted by the abnormal clavicles.

On examination with the X rays the fragments appear to be much less ossified than the ribs and are difficult to see plainly.

The child shows other deformities. The sternum is depressed from the level of the third costal cartilage downwards. The cranium is not normally developed. It is large, relatively to the face, and globular in shape, bulging over the ears, with prominence of the frontal regions. The circumference of the head is 21½ inches (54·5 cm.), slightly above the average for her age. The palate is high. The teeth are irregular. In the upper jaw the milk incisors were drawn at two years old for pain and their successors have not yet appeared. The

canines and bicuspids and one molar are present on each side. In the lower jaw three permanent incisors are present, spaced far apart, and one bicuspid and one molar on each side. The right bicuspid is irregularly placed. All the incisors and bicuspids should be present at this age. Three teeth are carious.

The thoracic and abdominal viscera and the limbs present no abnormal signs. The thyroid body can be felt. The nervous system is normal. The patient is intelligent, and in the sixth standard at school, though the mother thinks that she is not so bright as she was.

The shaft of the clavicle, the first bone in the body to ossify, has usually been regarded as arising in membrane from a single centre, appearing at about the sixth week, there being an additional centre for the sternal end which does not form until the eighteenth or twentieth year.

Although, however, ossification commences in this way from one centre, it afterwards, according to Quain's 'Anatomy' (tenth edition), progresses at both ends in cartilage as well as in fibrous substance. If this be so it seems possible that in such a case as this the membrane centre has not appeared, the two portions which are present being the inner and outer cartilaginous parts referred to. These portions are very imperfectly ossified, for when looked at with the X rays they did not compare in distinctness with the ribs, and in a photograph could hardly be made out.

According to Paterson ('Brit. Med. Journ.,' 1902, vol. ii, p. 77), it is probable that the clavicle contains more than one morphological unit, but this observer regards the outer part of the bone as ossified in membrane, and the inner in cartilage.

That the shaft of the clavicle may form in two parts is shown by a number of recorded instances in which only one part has been present, either medially or laterally placed. One such was recorded by Walsham ('Proc. Med Soc.,' vol. xii, p. 277, 1889), also by Grass ('Münch. med. Wochenschr.,' 1903, p. 1151), the outer part being

absent and the trapezius and deltoid getting their attachment to the acromion process of the scapula; and several other observers, including Schorstein* and George Carpenter† in this country, have recorded cases in which the clavicle was only represented by rudimentary inner or outer portions, or both, or was absent.

Two cases in which the clavicular deformity was closely similar to that here described are reported by Preleitner ('Wien. klin. Wochenschr.,' 1903, p. 70), occurring in a brother and sister, aged 12 and 8 years respectively. In the case of the boy tense bands were felt passing from one fragment to the other; the joint was freely movable and the shoulders could be met in front without pain. The sternal fragments in both these cases were about double the length of the acromial, the measurements being 6 and 3 centimetres in the one, and 5 and 3 in the other. The deformity is clearly developmental. The possibility of fracture *in utero* or at birth is excluded by the symmetry of the lesion on each side. It is interesting to note that Preleitner regarded his first case as a double pseudo-arthritic united fracture, but changed his view on finding that the sister had the same deformity and that the labours were normal.

Such a development or complete absence of the clavicles is usually associated with deficiencies of other membrane bones.

Marie and Sainton, for the reference to whose paper ('Bull. et Mem. Soc. Medicale des Hosp.,' 14, 3 s., p. 706, 1897) I am indebted to Dr. F. J. Poynton, described cases in which absence or deformity of the clavicles was associated with a globular cranium with frontal or parietal bosses, imperfect ossification of the fontanelles, a high or deficient palate, and irregular teeth, the malformations being hereditary and present in one instance in a father and son, and in another in a mother and daughter. To this condition they gave the name of sterno-cleido-dysostosis. It is now fairly well established that the majority of

* 'Lancet,' vol. i, 1899, p. 10. † *Ibid.*, p. 13.

published cases of clavicular deformities show in addition one or other of this group of malformations. In one of Preleitner's patients above referred to, that of the girl of eight, the photograph shows clearly enlargement of the cranium relatively to the face. Villaret and Francoz ('Nouvelle Iconographie de la Saltpetriere,' 1906) have published an excellent summary of twenty-eight recorded cases, with some good photographs. Abram has recently shown a case in this country ('Lancet,' August the 17th, 1907) of a more severe type than the one here described. Although we are indebted to Marie and Sainton for naming this group, it may be noted that Scheuthauer noticed the association between the deformity of the clavicles and the cranium in 1871.

The case here described should also no doubt be regarded as one of cleido-cranial dysostosis. The fontanelles were closed, but the clavicular deformity, the globular head, the arched palate, and the irregular teeth combine to form a clinical picture similar to that of the cases of Marie and Sainton.

No hereditary connection with a similar deformity in the mother is present in this case. I have not seen the father, but the mother says that his collar-bones are all right, and that he is exceptionally strong and accustomed to lift heavy weights, and this is against the probability of there being a malformation of the shoulder-girdle. The presence of myxœdema in the mother is worthy of remark. She first noticed an affection of her health two years after this child was born, a boy, said to be normal, having been born in the interval. Other healthy children have been born since she has been under treatment with thyroid extract. This is the third case in which I have seen some developmental defect in the child of a myxœdematous mother.

I am indebted to Mr. R. E. Humphry, late House-Surgeon at the Victoria Hospital for Children, for the photograph of the patient.

(*Exhibited November the 16th,* 1906.)

Discussion.

Dr. F. J. Poynton said he regarded the case as an exceedingly remarkable one, and he thought Dr. Spriggs' explanation very reasonable. It seemed to be borne out by some French observers, who, some years ago, showed at the Academy in Paris some remarkable cases of the same kind. He wished to say a word about achondroplasia as bearing on these cases. The profession was coming to recognise that the fault in achondroplasia was in the bone laid down in cartilage from the third to the sixth month. In those cases there was some fault in that formation of bone, ending in the arrest of the growth of those bones, thus producing the short extremities that were so well known in achondroplasia. It had been pointed out that where the clavicle was absent or only partially developed, that in some cases also the cranial bones, which were also developed in membrane, were absent, or partially so. It had been suggested, as Dr. Spriggs had just said, that cases of his type were examples of a fœtal bone disease, in a way allied to achondroplasia, and in a way the converse of that. This damaged bones laid down in membrane, achondroplasia those laid down in cartilage. Whether that was correct or not, it seemed to be fairly certain that there was such an association, according to the origin of the bones. A name had been applied to the condition, but he was not then able to recall it.

Dr. George Carpenter said the child shown by Dr. Spriggs was of interest to him, and as his name had been mentioned he would offer a few remarks of a case, together with an account of five other members of the same family similarly deformed.* In the case reported—that of a girl, aged 8 years—the clavicles were represented by two small fragments, thin, tapering, and cartilaginous, attached by their broader extremities to the sternum. The left was larger than the right, their respective lengths being $1\frac{1}{4}$th inches and $\frac{3}{4}$ths inch. An X-ray photograph suggested that the fragments were not altogether devoid of bone. The coraco-acromial ligaments were very prominent. The sterno-mastoid muscles apparently had some attachments to the fragmentary sternal clavicles. She could carry a well-developed baby a year old, she could push and throw well, and bear the weight of her body when hanging by her hands. No trace of the outer part of the clavicle could be seen on the right side, but on the left there was a faint shadow, which, from its size and position, suggested a cartilaginous rudimentary clavicle, with a more or less ossified inner end. The transverse process of the

* "A Case of Absence of the Clavicles, with an Account of Various Deformities of the Clavicles in Five Other Members of the Same Family," 'Lancet,' January the 7th, 1899.

last cervical vertebra was so enlarged as to suggest an approach to a cervical rib. The child also displayed another developmental peculiarity—viz., of the hands. The heads of the proximal phalangeal bones were enlarged on the palmar aspect, and there was thickening of the skin and subcutaneous tissue in these situations. The joints could be easily over-extended. A brother, aged 14 years, had a deformed *right* clavicle: it was divided into

Fig. 9.—The ends of the poser's forefingers are placed under the sternal fragments.

two portions; the sternal part was $2\frac{1}{4}$th inches, the outer $1\frac{1}{4}$th inches in length. Both unattached ends were rounded, and there was, as far as could be determined, ligamentous union. The transverse process of the right last cervical vertebra appeared prominent, and possibly the left also. The left clavicle displayed a prominent forward arching. Another brother, aged 19 years, showed a very peculiar kink in the position where the fragments in the other cases were separated. In a sister, aged 12 years, the left clavicle was natural, but the right was in two parts.

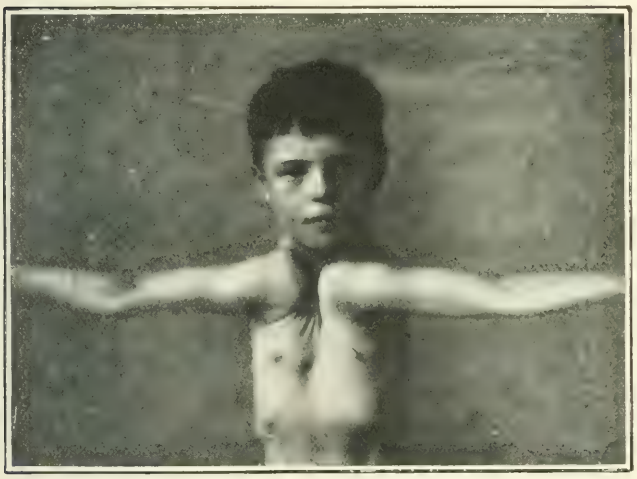
The sternal fragment was a little over 2 inches in length, and the acromial was 1¼th inches. Both unattached ends were rounded. On the right side the last cervical vertebra presented an enlarged transverse process or ? cervical rib. Another brother, aged 16 years, had normal clavicles, but the transverse processes of the last cervical vertebra seemed prominent. In a sister, aged 5 years, the clavicles were normal. Another brother, aged 7 years,

FIG. 10.—The arms have been tied together to keep the child steady for photographic purposes. They were placed there by muscular action.

had a deformed right clavicle. This was divided, as in the other cases, but to a much less extent. The outer fragment was 1½ inches long and the inner 1⅛ths inches. The bone at first sight appeared to be unaffected, but more careful examination revealed an indentation, and this indentation was found to be owing to a very close approximation of the fragments. The fragments were either united by a ligamentous band or there was a false joint there. The left clavicle displayed a depression in the

corresponding part, but there was no solution of continuity. The transverse process of the last cervical vertebra appeared to be prominent. The girl's father also had malformed clavicles, although he was not aware of the fact until it was pointed out to him. His clavicles were divided into two parts. On the right side the acromial fragment was nearly a finger's breadth lower than the sternal, its tip was internal to it, and it was over-ridden for half an inch or more by the sternal part. Both ends were rounded, and the inner was thickened. On the left side much the same deformity was noticed, except that the inner end of the outer fragment was not displaced downwards more than half an

Fig. 11.



inch or so. The ends of the bones were slightly movable—the outer fragments less so than the inner. The length of the inner fragments was nearly 3 inches. The child's mother stated that two of her children (females) had "club feet," but one that was examined was found to have flat feet, but not club feet. In relation to this fact there are other cases of this affection on record where associated congenital abnormalities have been noticed. The child had a depression at the lower part of her sternum (*vide* Fig. 9). Her father had a similar depression, and a brother, aged 19 years, presented a sternal depression sufficiently large to contain half an orange. The xiphoid projected a little forwards, the head of the gladiolus backwards, and the hole was made by the heaping up of the ribs in the

vicinity. Dr. Spriggs had spoken of operative measures. The members of the family which he (Dr. Carpenter) alluded to did

Fig. 12.—Back view, showing an extraordinary wide range of movements.

not appear to suffer in any way from their deformities, and he doubted whether any operation would be of any real service.

Postscript.—This case proved to be one of cleido-cranial dysostosis, the condition referred to by Dr. Poynton.

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19. A CASE OF ENCEPHALITIS.

By EDMUND CAUTLEY, M.D.

The boy, aged 4 years, was taken ill with fever, shivering, and nausea on August the 31st. On the third day he

vomited and was delirious (? a fit). Next day he became unconscious and had incontinence. He was admitted into hospital in an unconscious state, with some rigidity of the neck muscles, conjugate deviation of the eyes to the left, and trismus. Temperature 102·4° F. During the four days from admission he had nineteen fits. The fever subsided in twenty-four hours. He became sensible on the eighth day of the illness. The conjugate deviation persisted for two weeks, and he had palsy of the right external rectus and the left seventh nerve. The mental condition slowly improved, and he is now quite well, except for a little weakness in the muscles supplied by the right sixth nerve and the left seventh nerve.

(*Exhibited November the* 16*th*, 1906.)

20. A CASE OF BRONCHIECTASIS.

By T. R. WHIPHAM, M.D.

The child, a girl, aged 2 years and 4 months, suffered from a chronic cough, and from time to time brought up quantities of thick, greenish sputum with an offensive odour. She sweated a good deal, and was frequently sick with the cough. There was marked "clubbing" of the fingers and toes, and cyanosis was present to a varying degree. The thorax had a "pigeon-breast" outline, and over the right lung, to a great extent, there was an impaired note, and at the base the breathing varied at times from mere harshness to that of a cavernous character. Râles and creaks could be heard all over it. The patient had bronchitis and pneumonia when six months old, and this was immediately followed by whooping-cough, since when the child had had a continuous cough.

(*Exhibited November the* 16*th*, 1906.)

Discussion.

Mr. Raymond Johnson asked whether there was any possibility of there being a foreign body in the case. In all cases of

unilateral bronchiectasis in a child, particularly on the right side, that possibility had to be considered. He believed that in some cases whooping-cough had been diagnosed in children who were suffering from irritation due to a foreign body in the bronchus. He asked whether there was an X-ray photograph of the case.

Dr. George Carpenter said he thought some such cases were not infrequently associated with a spasmodic cough very much like that of whooping-cough, without a foreign body being present. He showed a case before the Society last year in which the spasm was intense. On many occasions the attack was exactly like a paroxysm of whooping-cough, but on others the child ceased breathing, became black in the face, and was unconscious for a considerable time, so that doubt was felt by the onlookers as to whether it would ever breathe again. Several X-ray examinations were made and a skiagraph was taken in that patient, but there was nothing found by these proceedings to suggest that there was a foreign body in the bronchus. He desired to ask whether an examination had been made of the blood, because in that case, and in others under his care, the red corpuscles were greatly increased.

Dr. Porter Parkinson said some years ago he published the reports of autopsies on two children who had suffered from what was supposed to be whooping-cough for many months; they both had a characteristic whoop. In one of the cases he found bronchiectasis with enlarged glands in the chest, which pressed on the vagus, so as to push it out of its course. In the other case there was no bronchiectasis, but merely enlarged glands in the thorax, which were not evident during life. He had at present under care a child who had been under his observation five years, during most of which time it had had attacks of coughing, with whooping. In that case the physical signs were slight, and were confined to one side, resembling those of mild bronchiectasis. Probably in that case there were enlarged glands pressing upon or in some way irritating the vagus. Therefore he thought the diagnosis in some cases of supposed whooping-cough was a little uncertain.

The Chairman (Dr. W. J. Tyson) (Folkestone), said the interest of the case to him was the clubbing of the fingers at so early an age, and so early in the trouble. One was in the habit of associating clubbing of the fingers with a chronic condition extending over some years. The present child was only two years old, yet there was marked clubbing of the fingers.

Dr. T. R. Whipham, in reply, said he had not entertained the question of there being any foreign body present; it did not seem to be likely, and he thought that bronchiectasis would explain the condition. He did not think the condition was on one side only, but that the left lung was also slightly affected.

He would, however, examine the child with the screen to see whether any foreign body was present, in which case he would report to the Society. He had not examined the blood, but would do so, and incorporate the report in the description of the case.

Postscript.—X rays showed no foreign body in the air passages, but shadows of enlarged mediastinal glands. The red blood-corpuscles numbered 5,400,000 per c.mm. The patient died in March, 1907. At the necropsy numerous bronchiectatic cavities of the size of small hazel-nuts were found throughout the lower two thirds of the right lung. The left lung was emphysematous.

21. CASE OF CONGENITAL LATERAL CERVICAL FISTULÆ.

By PHILIP TURNER, M.S.

Rosina B—, aged 8½ years, was brought to the out-patient department of the Belgrave Hospital for two sinuses discharging turbid fluid in the neck. These are situated symmetrically at the inner border of the sterno-mastoids about 1½ inches above the inner extremity of each clavicle. The right sinus is the larger of the two, and a probe can be passed along it for about 1 inch in a direction upwards and backwards. Pressure above the openings on each side causes thin, watery pus to exude. A distinct swelling can be felt above the opening on each side for 1 inch, and above this a cord can with some difficulty be felt extending upwards to a well-defined lump just below the angle of the jaw. This may be the upper limit of the sinus, or possibly is an enlarged gland.

The patient has no other deformities, and there is no family history of cervical fistulæ. The openings were present at birth, and the amount of discharge has varied from time to time, but has never entirely ceased. The sinuses have never been acutely inflamed. The thyroid gland is large, but there is no persistent thyro-glossal duct.

The fistulæ and the cyst-like cavity above them are probably derived from the cervical sinus, which is formed by the growth backwards of the second and third branchial arches over the third and fourth branchial clefts. The upward prolongation towards the angle of the jaw must be regarded as persistence of either the third or fourth branchial clefts.

(*Exhibited November the 16th,* 1906.)

22. SYPHILITIC NEPHRITIS IN AN INFANT.*

By GEORGE CARPENTER, M.D.

William H—, aged 3 months, started "snuffling" three weeks before his admission into the North-Eastern Hospital on November the 5th, 1906. A week later the right hand became puffy, and a week before his admission into hospital his legs, arms, and neck became œdematous. Breast-fed child. One other child tuberculous; no history of miscarriages, but father was a soldier and served in India.

When admitted into hospital he was a fat child with a muco-purulent discharge from the nostrils; was dropsical in the feet, legs, and lumbar region, and over the buttocks, the backs of the thighs and the calves was cutaneous staining as of a former eruption. The organs were apparently healthy. *The urine* was markedly albuminous —12 grms. per ounce. Microscopically hyaline, epithelial, and coarse and fine granular casts, a few pus cells, red blood-corpuscles, and kidney epithelial cells were detected. *Urea* measured 4 grains to the ounce, and on the 14th inst. was 4½ grains per ounce. No spirochætes found. *Blood examination:* Red corpuscles, 3,200,000 per c.mm; white corpuscles, 41,000 per c.mm.; and hæmoglobin, 60 per cent. Has been treated with Hydrargyrum c̄ cretâ gr. 1 thrice daily with some apparent benefit.

(*Exhibited November the 16th,* 1906.)

* For sequence, see article "Nephritis in Infants," p. 277.

23. A CASE OF TROPHO-NEUROSIS.

By F. J. POYNTON, M.D.

Girl, aged 10 years. Condition of left leg and labium major noted from birth.

Thickening almost entirely in the soft tissues. Skin obviously thickened and more hairy than on the unaffected side. The child experiences no inconvenience.

The condition extends on to the abdomen on the left side almost to the level of the umbilicus (Fig. 13).

Dr. Poynton thought that it was a congenital lymphatic fault, due to some obstruction of the lymphatics, and he would like to hear whether such a case ran any risk of becoming a case of elephantiasis, with large vesicles. He had never seen anything like it before.

(*Exhibited November the* 16*th,* 1906.)

Discussion.

Dr. E. I. Spriggs said he was considerably puzzled by a similar case two or three months ago. There was chronic œdema of the right leg from the knee to the ankle. There was no œdema of the foot, and the skin was not thickened; he thought the thickening in Dr. Poynton's case was not so great as was described in connection with lymphatic obstruction. The child was seven years old, and the condition was first noticed some time ago and may have been congenital, but the mother had not noticed that the leg had been larger than its fellow from birth. He advised tonic treatment, massage, and suspending the leg. There was no other lesion, no albumin in the urine. He heard there had been some temporary improvement in the condition, but it had not gone away. There were records in the literature of a number of cases of localised œdema in one limb of undetermined cause, coming on in the early years of life, some of them as extensive as in Dr. Poynton's case, others much less so. Some of them could be classified as hereditary œdema as described by Rolleston. He asked whether there had been a blood examination.

Dr. F. Parkes Weber said he regarded Dr. Poynton's case

as one of trophœdema, similar to those described by H. Meige * and others. The absence of a history of a similar condition in any other member of the family did not suffice to exclude it from

Fig. 13.

that group. Friedreich's disease was first described as, and certainly was, a "family" disease, but many cases had been met with in which there was no history of its occurrence in other members of the family. In every "family" affection one was

* See especially H. Meige, 'Nouvelle Iconographie de la Salpêtrière,' 1899, No. 6, p. 453.

sure to occasionally come upon apparently isolated cases in which there was no family history of the same affection. In Dr. Poynton's case Dr. Weber did not consider that there was any real hypertrophy of the bones; at any rate the affected limb was not longer than the other. This was very important in regard to classification and diagnosis, because there existed another congenital or developmental affection in which one lower extremity was decidedly enlarged and in which the bones of the abnormal extremity were longer, and probably also thicker than those of the normal side. These latter cases likewise differed from Dr. Poynton's in there being distinct vascular hypertrophy, involving the large arteries, or both arteries and veins, of the affected limb; and as a rule there was also some vascular tumour-formation (*i. e.* either blood nævus, or lymphatic nævus, or a mixture of the two) associated with the hypertrophy of the main vessels of the part. In regard to the distribution of the change in the soft parts in Dr. Poynton's case, he (Dr. Weber) thought the trophœdematous condition involved the whole lower extremity up to the gluteal fold behind and the inguinal fold in front, the labium on the same side being likewise enlarged. In reply to Dr. Poynton's question, as there had not been, so far as he knew, any necropsy or microscopical examination by means of a "biopsy" on a case of the sort, he could not say any more than he had done. The condition had probably something to do with the growth of the lymphatic and connective-tissue elements in the limb, and was either congenital or developmental in regard to its onset.

Mr. George Pernet said he had given some attention to the subject of trophœdema, especially in the family type. Apparently complications did not arise in that kind of trophœdema. When, however, there was elephantiasis of the leg following repeated attacks of erysipelas, complications such as those which Dr. Poynton had referred to were apt to occur. He had not seen Dr. Poynton's case, but judging from what had been said about it, it appeared to come into the category of family trophœdema. Such cases were nearly all females; he did not remember any case in a male. If the present patient lived and had children, the condition would probably be continued in the female line. It was unusual for the skin condition to extend as high up as the umbilicus.

Dr. F. J. Poynton, in reply, thanked the members for their remarks. Did trophœdema imply a lymphatic affection?

24. THREE UNUSUAL CASES OF INFANTILE PARALYSIS.

By GEORGE CARPENTER, M.D.

Ruth A—, aged 3 years, was admitted into the North-Eastern Hospital on November the 7th, 1906. The day previous she complained of feeling tired, went to bed, and later on said she could not walk, and that her legs pained her [she has not moved them since]. Has had pains in her upper arms and her head, pain in the back and in the neck, and she cried when she was touched.

The head was noticed to drop soon after the illness began. No specific fevers.

When admitted *her head hung down* and she could not lift it up, but she could rotate it. She speaks rather indistinctly. The legs are motionless, except slight rotation in the left; no knee-jerks; plantar reflexes very faint, flexor.

Urine: trace of albumin; no incontinence.

November the 15th.—No change except she can raise her head a little when she tries; she cannot sit up. All muscles of both legs and thighs give reaction of degeneration. Glutei and back muscles work normally.

Urine deposit consists of a large number of oxalates, pus, and epithelial cells.

Elizabeth S—, admitted into the North-Eastern Hospital October the 19th, 1906, aged 20 months. She began to walk at eleven months old. Seven weeks previous to her admission she had diarrhœa and vomiting, from which she recovered after seven days' illness, which left her very weak. Up to this time she could walk well, but since she has neither walked nor attempted to sit up. She grasped nothing with her right hand, but she could use her left, with which she fed herself. The left leg became stiff of a morning and stuck out sideways, and

both legs were very cold. Her condition remained much about the same, except that the left leg became stiffer. Whooping-cough four months previous. Mother has had one miscarriage.

On examination: Cannot sit up; the legs are blue and mottled; the right leg is flabby and limp, the *left is spastic.* No knee-jerks obtained. The legs do not move at all. The left ankle is held stiff. Plantar reflex, flexor.

On November the 15th she could move the right toes, the ankle-joint was flexing up and there was slight movement. The left leg was very spastic; knee-jerk obtained; slight movement at all joints, but ankle-joint too stiff and flexed to permit much movement. She appeared to be more sensible than when first seen.

Right calf and extensor cruris and the left calf give complete reaction of degeneration. Tibialis anticus reacts normally both sides, and the right flexor longus digitorum. Other muscles react to faradism, though feebly.

William T—, aged 11 years, was admitted into the North-Eastern Hospital with the following history, on October the 22nd, 1906. He had been ill with chorea on and off for six years, and three months ago suddenly lost the use of his legs. He could move his legs but could not walk, but now he was seen to be improving, though he could walk only for a short distance. No history of arsenic or a suspicion of its abuse.

On examination: He can move the knee-joints and the toes quite well, but there is loss of power in the ankles. When walking his feet do not appear to drop so much as when he is sitting down with the legs hanging. In this position the ankle-joint is fully extended. He moves his toes but the ankle-joints are motionless. Stepping gait, but can get about well. Knee-jerks not obtained; slight plantar reflex, flexor. The tibialis anticus, the extensor longus digitorum, the extensor longus hallucis and the peronei of both legs give the reaction of degeneration. The calves, the flexors of the digits and big toes, the

tibialis posticus, the flexor brevis, and the extensor brevis, and all the thigh muscles react normally.

(*Exhibited November the* 16*th*, 1906.)

25. A LARGE RETROPERITONEAL DERMOID TUMOUR OR TERATOMA.

By RAYMOND JOHNSON, B.S.

A large retroperitoneal dermoid tumour or teratoma in a child, aged 2 years and 9 months, was shown. There was a large elastic tumour in the left half of the abdomen, presenting characters similar to those met with in a sarcoma of the kidney. The lumbar spine showed a well-marked lateral curvature to the right, with rotation of the vertebræ, and in the left loin were two small, fluctuating swellings not apparently connected with the tumour in the abdomen. Before operation the case was regarded as probably tuberculous disease of the spine, with lumbar and large retroperitoneal chronic abscesses. An exploratory incision in the loin revealed the true nature of the case. Part of a small cyst removed from the posterior part of the tumour presented the naked-eye and microscopic characters of a dermoid. The exhibitor asked for advice as to whether he ought to attempt removal of the tumour which had become larger in the few weeks that he had had it under observation. He felt some hesitation in the matter.

(*Exhibited November the* 16*th*, 1906.)

Discussion.

Mr. Francis Jaffrey said that if Mr. Johnson thought of removing the tumour he ought to do so without loss of time, as it might soon be too large to admit of operation. The operation would be a serious one, and he did not envy Mr. Johnson the task.

26. PRECOCIOUS OBESITY WITH HIRSUTIES; ? ADRENAL TUMOUR.

By LEONARD GUTHRIE, M.D.

Patient is a boy, aged $4\frac{3}{4}$ths years. He had measles at the age of two and has since become abnormally fat. Three months ago he had convulsions lasting thirty-six to forty hours, with loss of consciousness. General growth of hair has been noticed since occurrence of obesity. Family history is unimportant.

The child resembles a burly drayman in miniature. His cheeks are enormously distended with fat and are bright red and shiny. The trunk and upper extremities are laden with adipose tissue, which is also present in form of a hump in the cervical region and large folds in the mammary and lumbar areas.

The lower extremities are less encumbered by fat than the rest of the body, and are strong and muscular.

Hirsuties is present on the forehead, upper lip, back and pubic regions. The generative organs are infantile. Intelligence is perhaps above the average.

Heart and lungs are normal. Urine contains a trace of albumin.

Nothing in the shape of a tumour can be felt on palpation of the abdomen.

His weight is 3 st. 1 lb. 10 oz.

Girth of chest at nipple line (lying down) 27 inches. When sitting up the fat becomes pendulous and girth increases to $29\frac{1}{2}$ inches.

Abdomen, greatest circumference = 26 inches.

Mid-upper arm = 8 inches.

Forearm = $7\frac{3}{8}$ths inches.

Calf (*R.*) = $8\frac{1}{4}$th inches.

Calf (*L.*) = 8 inches.

Remarks.—The case may be compared with one shown at the Society on January the 19th, 1906. This was a girl, aged $3\frac{1}{2}$ years, who exhibited marked obesity of

precocious type, and who, three months subsequently, developed signs of puberty. She resembles a little stout woman at about the menopause. Hirsuties, precocious puberty and obesity have frequently been found associated with adrenal tumours (hypernephromata), malignant or hypertrophic in nature, so it is probable that in these two cases a similar association exists.

Postscript.—The patient died of acute tuberculosis in March, 1907. After death a solid tumour of the size of a walnut was found to occupy the site of the left adrenal body. Its nature was probably that of a hypernephroma malignum. The right adrenal was missing.

The girl mentioned died in November, 1906. No tumour of any organ was found.

(*Exhibited November the* 16*th*, 1906.)

27. RICKETS—ÆTIOLOGY.

By LEONARD S. DUDGEON.

Rickets is mainly a disorder of the temperate and cool climates, and appears to increase in frequency with the progress of civilisation. It is very common all over Europe, with only a few exceptions, while in India it is said to be so rare that a case in a native is considered worthy of publication. In the New Hebrides the greater proportion of children are said to be either rickety or scrofulous, while, again, in Japan it is stated to be extremely rare. In the United States of America it appears to be less common than in Europe. Dr. Eustace Smith considers that no special facts have been brought forward to show that rickety parents are more likely to have rickety children than healthy parents.

The two main points which we have to consider in the production of the disease appear to be errors of diet and bad hygenic conditions.

The disease does not appear to be common in nursing children unless lactation be unduly prolonged, except in the cases of Italian and Negro children.

The three great theories which have been advanced to explain the causation of rickets are mainly directed towards the bone changes. Heitzmann produced rickets in animals by persistent subcutaneous injection of lactic acid and feeding the animals on the same substance. It has been shown, however, that this investigator avoided all foods containing lime in his experiments, and, therefore, an explanation is afforded why other observers have failed to obtain similar results with lactic acid. Roloff and Voit produced the phenomena of rickets in pigs and young dogs by continual feeding them on food which contained little lime. It was these experiments which made the so-called lime theory so popular at one time. Vierordt has stated, however, that the absorption of lime salts during the development of rickets is as good as in health, while Dr. Luff's analysis show that foods upon which children are especially liable to become rickety, such as farinaceous foods, are rich in lime and also in phosphoric acid, and that cow's milk contains more of these substances than human milk.

Most observers have endeavoured to prove that the amount of lime salts in the urine of rickety and healthy children is the same, but we must remember that calcium salts are excreted mainly in the fæces.

In the celebrated experiments made by Mr. Bland-Sutton at the Zoological Gardens, which are now known to everybody, he found that when he withdrew milk from the diet of young animals and fed them on meat, vegetables, or starches, rickets occurred, and the earlier this line of diet was adopted the more certain the results obtained.

Most physicians of the present day appear to hold, however, that the most important element to be considered in the diet of children is the amount of fat which is given in the food. It is hardly necessary to add that it is quite unimportant the amount of a certain diet which is passed

into the stomach. The main question is the amount of absorption which has taken place.

There is no doubt that bad hygenic conditions, which is of importance in cases of rickets in the human subject, is of still greater importance in all experimental work. Young puppies and kittens born and bred in the animal houses attached to various scientific laboratories are especially liable to develop rickets even when the diet has been most carefully regulated. This is mainly due to the difficulty of obtaining sufficient amount of light and air which is necessary for the animals.

In the investigations which I made on the thymus gland in children, I was struck by the fact that in every case of lymphatic hyperplasia, such as is found at the autopsies on cases of so-called lymphatic constitution, well-marked changes were found in the bones, such as occur in rickets.

We know that absorption of toxins from the intestinal tract has been put forward as an explanation of the changes met with in this condition, and, still further, an unknown toxin has been considered to be the cause of rickets. It always seems to me to be a refuge for the destitute when we urged the claim of a toxin as an ætiological factor in disease, when we consider that nothing is more easy than to ascribe the changes as due to toxins or toxic substances, but in most instances it is equally difficult to prove the point because they occur in every disease. It is for this reason that I have avoided, as far as possible, bringing forward any toxic theory to explain the ætiology of rickets, even if in the future practical proof may be forthcoming to show that this is so.

(*Read December the 14th*, 1906.)

28. RICKETS—SYMPTOMS AND DIAGNOSIS.

By F. J. POYNTON, M.D.

I feel considerable difficulty in carrying out the duty you have kindly entrusted to me of introducing the section upon the symptoms and diagnosis of rickets, for the more I see of the disease the greater embarrassment I feel in deciding what does and what does not constitute rickets. Yet I think that this attitude is perhaps for our particular purpose better than one of dogmatism.

Rickets is generally admitted to be a constitutional disease and not an affection of the bones, and putting aside for the moment fœtal and late rickets, the symptoms commence in the first two years of life.

Among the early constitutional symptoms are anæmia, general flabbiness, and profuse sweating about the head. It does not appear to me that fever is a feature of uncomplicated rickets, and if Mircoli's view that the osseous lesions are the result of chronic osteo-myelitis were correct I should have expected that the evidence of fever would have been more constant.

Sometimes the changes in the bones are the first symptoms to attract attention. Although these changes are of great interest from the point of treatment, I shall only touch upon a few debatable points. I should like to hear the Society's opinion upon the degree and frequency of marked bony tenderness. Such features I associate with scurvy complicating rickets or with osteogenesis imperfecta, and give my impression that there are often uneasy sensations in the bones but seldom active pains. This skiagram, taken for me by Mr. Higham Cooper, shows sufficient periosteal change at the end of the diaphysis of a long bone to make it reasonable to believe that there may be unusual sensations accompanying such a process. The bony deformities and delayed dentition I must be content to mention, and turn next to

fractures. I would suggest that complete fractures are less common than generally supposed, and the occurrence of several would incline me to think the condition was one of osteogenesis imperfecta; this, again, is a matter for discussion. Muscular weakness is another very striking feature of rickets, and there is a class of case in which this symptom is much more prominent than bony deformity, and it seems to occur in children who are very well cared for, but their diet has been at fault.

Special attention has been directed to the separation of the recti-abdominis muscles by the distended intestines, but this is only evidence of muscular feebleness.

In some instances rachitic children are extremely fat, and the occurrence is of interest with relation to a similar adiposity occurring in some examples of mental deficiency.

Head-rolling is frequent in the rachitic, and among the causes given are dentition and ear disease. To these may be added, I believe, uneasy sensations in the cranial bones. Craniotabes and Parrot's nodes will be alluded to under syphilis and rickets. Not only do the bones suffer in rickets, but the *ligaments* are also lax and feeble.

The *nervous symptoms* may next be considered. We all associate these with this condition: (1) Laryngismus stridulus, (2) tetany, and (3) convulsions. There is clearly room for discussion as to the nature and reality of this association.

Kirchgasser's statistics are remarkable ones, for in 443 consecutive cases of laryngismus stridulus he found rickets present in 89 per cent., and in 283 cases of tetany rickets was present in 79·8 per cent.

With regard to convulsions my friend and assistant, Dr. R. O. Moon, in investigating for me 200 cases of epilepsy,* found that in 10 per cent. of his series the first convulsion was associated with rickets. I feel that statistics dealing with poor children are of but little value, for many a first convulsion is never seen at a hospital, because the child recovers and the parents do not trouble further unless the

* 'Lancet,' December the 24th, 1904; September the 15th, 1906.

attacks are repeated. It would appear, however, that when a convulsion occurs in a rachitic infant you are not able to give any confident opinion whether or not this may be the commencement of a genuine epilepsy. I should particularly like to hear opinions upon the outlook of convulsions in the rachitic.

Spasmus nutans is frequently associated with rickets. For example, in thirty-three out of thirty-five of John Thomson's cases, and twenty out of twenty-five of Still's, the seasonal prevalence of spasmus nutans and rickets are in accord, but Still tells us that 44 per cent. of all cases of disease brought to his out-patient department are rachitic, and due allowance must be made for the frequency of rickets. Granted that some, if not all, the above-mentioned nervous phenomena are associated with rachitis as a powerful predisposing cause, how does the rickets act?

It does not seem that we can get any further than Sir W. Jenner or Dr. Cheadle, who attributed the unstable nervous system to imperfect nutrition, and considered the fermentative processes in the intestine as a factor in the tetany. Shuttleworth has directed attention to mental hebetude and backwardness as results of rickets both in the poor and well-to-do.

Another important group of symptoms are the *respiratory ones*: catarrhal laryngitis, bronchitis, and broncho-pneumonia, and pulmonary collapse. With these I will not detain you, or, again, with those of equal importance such as catarrhal gastritis, enteritis, and entero-colitis, flatulent dyspepsia, and urticaria. The anæmia and general muscular feebleness of rickets show themselves by a feeble circulation, due to weakness of the heart's action. In a considerable number of cases there is a functional, systolic, pulmonary murmur, but I am doubtful of the existence of organic valvular disease as a result of rickets. The anæmia is a simple anæmia.

The liver and spleen are, owing to the shape of the thorax, often felt unusually plainly, and we have the authority of Dr. Cheadle for believing that in rare cases,

and possibly as a result of pulmonary congestion and cardiac feebleness, the liver is actually larger and harder than normal. True enlargement of the spleen as a result of pure rickets is a very debated point. The lymphatic glands are commonly described as enlarged, but this enlargement is not a striking feature of the disease. The urine presents no special features.

The course of rickets varies considerably with the case devoted to treatment. Although one or two years may see the disease at an end, if the cases are woefully neglected active signs may persist, as in the cases shown in this photograph, the eldest of the three being ten years, the brother seven, the younger sister five years old. They were all anæmic, and their bones were yielding.

Does fœtal rickets exist? It seems to me that Ballantyne, in his classical work on ante-natal pathology, made a very wise remark when he suggested that rickets in fœtal life might be a very different disease from the acquired rickets. I believe personally in its existence, and some bones recently shown at the Pathological Society of London by Dr. F. S. Dawe, both macroscopically and microscopically certainly seemed to me to be rachitic.

Late rickets has this year attracted attention at the Clinical Society of London, where some remarkable cases were shown. Our Treasurer, Mr. Clement Lucas, nearly a quarter of a century ago called attention to the association of this late or adolescent rickets with intermittent albuminuria. The particular points which appeal to me for discussion with regard to this condition are:

(1) Is it rickets?

(2) If it is rickets does it really date from infancy, and are these cases examples of relapse?

(3) Is it a true rickets starting in adolescence, without necessarily any previous history of the same condition at all?

The diagnosis of rickets might occupy a great deal of your time, and so I will confine myself to some of the most practical difficulties.

Firstly: Early rickets may be overlooked, the anæmia, sweating, and slight bony changes escaping observation.

Secondly: *Syphilis and rickets.*—I here take advantage of the writings of Dr. George Carpenter, who has contributed much to our knowledge of this subject in our own country. Parrot's nodes and craniotabes are two bony changes about which there has been much discussion. That they may be syphilitic is certain, and all will, I think, agree with Dr. Carpenter when he asserts that rickets greatly favours their occurrence in the syphilitic. Can they occur without any syphilitic taint? Personally, I think they can.

A combination of rickets and syphilis tends to cause a puny, marasmic child. Enlargement of the spleen is a prominent feature of congenital syphilis with or without rickets.

The diagnosis, then, between syphilis and rickets is not difficult, but the combination of syphilis and rickets is the puzzle, and is most difficult when there is marked rickets but no striking evidences of syphilis.

Achondroplasia is usually easily distinguishable. The short limbs, healthy appearance, long body and "trident" hands are very characteristic. These may, however, be associated with rickets, and very severe rickets again may cause stunting of the growth of limbs. There is not, however, in such cases the symmetry of achondroplasia, and there is a far greater tendency to bony deformities. I show photographs of classical achondroplasia, and of combined rickets and achondroplasia. *Osteogenesis imperfecta, osteopsathyrosis,* or *mollities ossium,* is a much more difficult matter, and I will at once come to the point by making the rigid statement that if rickets is a disease, then osteogenesis imperfecta is not rickets. If rickets is a disease, it is, I hold, curable, but I have conclusive evidence that typical osteogenesis imperfecta, under the most careful anti-rachitic treatment prolonged over two years is not influenced in the least by it; the fractures, on

the contrary, in one of my cases increased in number, and eventually, whenever the child was lifted in bed the ribs were fractured. Neither is this condition syphilitic, for I pressed suitable treatment for months without the least result. I show a radiograph of this case taken in 1902, illustrating fractures. These had been looked upon at two London hospitals as evidence of rickets, and the case was called rickets. The boy died after enduring innumerable fractures. The next child in the family was healthy, but the last has commenced the same process of multiple fractures, and is under the care of my colleague, Mr. Kellock. I show another photograph from a case now under my care which has had careful, but not such complete treatment as the first. It illustrates the extraordinary rarefaction of the bones and also the fractures. This case I showed at the Medical Society of London last year, and since then two more fractures have occurred, and I have brought her to-day. Lastly I show another photograph, illustrating the congenital occurrence of the fractures and bony yielding. The child was three weeks old when the photograph was taken, but had been in this condition at birth. The cardinal features of this disease are: (1) It is frequently congenital; (2) often more than one in a family is affected; (3) fractures are frequent and often numerous; (4) the bones can be easily bent by the hand; (5) anti-rachitic and anti-syphilitic remedies do not bring about cure. The bony tenderness in these cases is great, and may precede any visible fracture which in time occurs without any appreciable violence. There is generally a persistent and slight, irregular fever.

Scurvy may complicate rickets. The tenderness and swelling due to hæmorrhages under the periosteum, the condition of gums, occurrence of hæmaturia, and nature of the diet will differentiate them.

Cretinism, and particularly partial cretinism, in my experience is mistaken for rickets, and valuable time wasted. The large tongue, harsh skin, scanty hair, fat pads, and dull expression are among distinguishing signs.

Time will not permit me to more than mention that infantile paralysis and rickets may be confused, as also the curious arthritic affection described by Still. The rickety spinal curve is not easy to distinguish from caries, nor the abdomen from tubercular peritonitis.

(*Read December the* 14*th,* 1906.)

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29. RICKETS—PATHOLOGY AND MORBID ANATOMY.

By W. A. MILLIGAN, M.D.

That rickets is a general disease of nutrition and not a bone disease is accepted on all hands. That it is also a curable disease by dietetic measures is the great proof that faulty diet plays the most important part in its production.

Experiments on animals have borne this out. Bland-Sutton found that the withholding of fat from the diet of young animals produced in them a rickety condition, and that when fat-containing articles of food, such as milk, cod-liver oil, etc., were added to the diet, the rickety condition was cured.

Guerin produced rickets by means of a meat diet. Chalmers Watson, of Edinburgh, recently found in experimenting with a meat diet on animals, that "results show that the bones of animals fed on excessive meat diet present an appearance of delayed and imperfect ossification, with increased vascularity and an increase in the number of red blood-corpuscles. Macroscopically the bones resemble those of rickets, while microscopically they do not." He adds: "The epiphysial lines are quite distinct from those present in that disease."

Experiments on animals seem to show that the want of "fat" is the chief element in the production of rickets. To settle how this deficiency of fat acts is the crux of the

whole question, and up to the present no satisfactory explanation is forthcoming.

The whole process of assimilation and metabolism must be very seriously altered, as practically every system in the body is affected.

The syphilitic origin of rickets has been brought forward, but never conclusively proven. As tending to disprove it, it may be mentioned that rickets is common amongst the lower animals. The micro-organismal theory, and the theory that rickets is due to some trophic influence on the nervous system, have not been proved. What one may call the "lactic acid" theory is disposed of by the fact, as pointed out by Hutchison in his lectures on diseases of children, that were an over-production of lactic acid the cause of the mischief, that then the inorganic matter of the bones would be dissolved away as lactate of lime, and not, as is the case, phosphate of lime.

Kassowitz regards the changes as inflammatory, and brought on by the presence of some irritant. The hyperæmia of the periosteum, marrow, cartilage and bones is, in his opinion, the primary lesion, out of which all others arise. He proved, experimentally, that hyperæmia of bone resulted in defective deposition of lime salts. Thus so far the essential pathology of rickets remains a mystery.

Morbid anatomy.—The most constant changes are to be found in the osseous system. In severe cases the whole skeleton suffers, and sometimes to a very marked degree, although there may be considerable variations in the actual bones affected. The skull of a rachitic child is found to be slightly larger than the skull of an average child of same age. This I take to be due to the protuberances that form at the points where ossification is most active. These protuberances are made up of great increase in the size of the trabecular spaces, and during the active period of rickets are soft and easily indented.

Craniotabes.—This lesion is regarded by some as belonging to syphilitic affections, while by others it is regarded as one of the early symptoms of rickets. These tabetic patches

have been found in purely rachitic skulls, situated more especially in the parieto-occipital region of the skull, and are due to areas of undeveloped bone.

Thorax.—This presents very typical lesions. It is narrower from side to side, and longer antero-posteriorly than an average thorax. The *beading of the ribs* is usually well marked, and if not actually seen on the outside of the thorax will very likely be found by inspecting the pleural surface. It is possible that such beading is seen only in a few ribs. The cause of such I need not enter upon; suffice it to say that the essential pathological feature is that the osteoblasts are apparently unable to complete their work—viz., to deposit calcareous salts. The crude fibrous tissue collects at the epiphysial line, and this, along with underlying great vascularity and wide absorption-spaces accounts for the characteristic swellings found in rickets. A deep, oblique furrow is found running down at the junction of the ribs and costal cartilages, which furrow produces anatomical changes in the lungs beneath. Thoracic deformities are common, as, for example, pigeon-breast, funnel-chest. Pigeon-breast is not necessarily a rickety deformity, as it is found to occur in cases where there has been some obstruction to the air entering the chest freely.

In the long bones there are found the characteristic enlargements at the epiphyses, these being usually specially well marked at the wrists and ankles. Under the periosteum is found a soft, vascular, spongy tissue; beneath this the parts are firmer, while deeper still there may be complete ossification. Owing to the fact that there is a great deficiency in the mineral constituents of the bone, the bones are soft and flexible. This condition permits of bending under pressure, and hence arise the various deformities so characteristic of rickets. Rickety bones are small and stunted, although when the rickety process is checked and the stage of restitution is reached the bones are densely compact and hard.

Spine.—Here there is found some bending, usually in

form of an exaggeration of normal curves, sometimes extremely marked, and due to the laxity of the ligaments.

The *pelvis* also becomes distorted from pressure from above.

Visceral changes.—Catarrhal changes are found in the various organs, as lungs, stomach, intestines, etc., and there is an hyperplasia of the fibroid tissue in the liver, spleen, and glands. This change was originally described as an "albuminoid infiltration," but more recently it is found to be due to an overgrowth of the normally existing fibroid tissue in these organs. The spleen is usually the organ most affected, and the change is regarded by some as evidence of the presence of something more than actual rickets.

In the *lungs*, besides the catarrhal changes, one finds areas of *collapse* and areas of *emphysema*, which are dependent on pressure by the deformed thorax.

The *nervous system* presents no lesion, and this is remarkable, as nervous symptoms play a very important part in the disease. In the brain various changes have been described, but never definitely proved to be due to rickets. The nervous manifestation must therefore be regarded as due to imperfect nutrition of the nervous centres.

The *muscular system* in the same way presents no lesion of the muscles to account for the sometimes very pronounced muscular phenomena.

The condition of the blood in rickets is simply that found in cases of anæmia. It is of poor quality, and may present a leucocytosis, usually more marked in cases in which the spleen is enlarged.

(*Read December the* 14*th*, 1906.)

30. RICKETS—SURGICAL ASPECT.

By H. BETHAM ROBINSON, M.S.

Previous speakers in their remarks have alluded to much that concerns the surgeon, especially as to the pathology, symptoms, and to conditions allied to rickets. The surgeon in the main has to deal with the changes liable to ensue from the softened state of the bones. He must bear in mind this generalised change in the skeleton, and must direct his efforts to prevent or rectify any deformity. Muscular action and abnormal pressure, forces that make for evil, must as far as possible be controlled. It is within the experience of all that deformities tend to disappear in many cases without any special surgical treatment, even under the most disadvantageous surroundings, and are much more likely to do so given good food and a perfect hygiene. To prevent or control deformity, complete rest has been advocated; this I would only advise in the early stage and with very soft bones. Otherwise, with the poor particularly, this only means a reduction of fresh air, such an important factor for cure, and much more good will be gained if they are able to get about as usual with the limbs fitted with suitable light apparatus.

It is with the rickety changes in the spine, chest, and the extremities that the surgeon is more often called on to treat. With the deformities of the spine I am not going to deal. The laterally contracted chest and pigeon-breast are familiar to all, the softened bones being affected by the increased external pressure and excessive muscular action associated with defective inspiration. For this the upper air passages are responsible, adenoids, enlarged turbinates, or enlarged tonsils producing deficient air-entry. Often we hear of breathing exercises extolled to remedy this defect, but in the majority of cases it is so much time wasted unless we first get a clear airway by removing the redundant tissue.

We are not often called upon to treat curves of the upper limb, but if they are marked and the bones pliant it is worth while trying to rectify the defect with splints.

In the lower limb the deformity, genu valgum, offers points for discussion. Since the introduction of skiagraphy, much light has been thrown on the condition of the bones which before was imperfectly understood. For many years Macewen's views had been accepted, that there was curvature of the lower end of the shaft of the femur with its convexity inwards, or elongation of the internal condyle. We now know that such is the exception. The relative vertical thickness of the condyles is maintained, what lowering there is being due to an increase of bone on the inner side at the end of the diaphysis, as described by Mickulitz. Another important point, however, has been established by Morton, of Bristol, who has shown the frequency of the deformity in the leg, and he regards it as the essential feature in children.

In treating cases of genu valgum we must formulate some general rules as to when to operate. It is not advisable to operate on a case under five years old, and even great care must then be taken to see there is no evidence of active rickets present. As to the amount of separation of the malleoli indicating operation it is difficult to give a positive figure, and it must be a matter of personal judgment. In doing an ordinary osteotomy of the femur, it may be a question between using the chisel or saw. With very dense bone and the modern springy table the chisel is difficult and tedious to use; what is more, there may be actual danger in so doing from the tendency of the chisel to glance away. This happened to me a little while ago with a dense bone; the chisel slipped into the adductor, and made a small wound in the popliteal artery. Luckily the vessel was seized, tied, and divided between two ligatures, and all went well afterwards. Morton, from his observations into the position of the bend, advocates removing a wedge from the tibia, its base being inwards. He maintains that by so doing the

vertical line of pressure tends to pass down the middle of the leg rather than outside, and that the line of the knee-joint is straight instead of being directed inwards and upwards. Skiagraphy has shown us why in many cases we do not, in spite of a satisfactory operation in the neighbourhood of the knee, get a very straight limb. There is an associated coxa vara with an externally rotated and adducted femur. It is a matter for consideration whether in such cases we should not in addition deal with the neck of the femur.

(*Read December the 14th,* 1906.)

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31. RICKETS—TREATMENT.

By R. HUTCHISON, M.D.

(1) *Dietetic treatment.*—Whatever view be adopted as to the exact causation of rickets, it is generally agreed that its treatment must be mainly dietetic. The chief faults in the diet which experience has shown tend to result in rickets are: (1) a deficiency of proteid and fat, especially of the latter, and (2) an excess—either relative or absolute—of carbohydrates.

If breast-feeding be continued too long until the milk begins to deteriorate in quality, rickets often results, and in such case improvement rapidly ensues upon weaning. In the case of a bottle-fed child it will usually be found that a too dilute cow's milk mixture has been given or that the food has contained too little fat and too much carbohydrate, as in the case with condensed milks and most patent foods. In such a case the child should be put upon a diet of undiluted cow's milk and fat added either in the form of cream or of some substitute for it. Beyond the age of twelve months some of the milk feeds may be thickened with oat-flour, which has the advantage

of being rich not only in proteid but also in fat, iron and phosphorus, and I like to give yolk of egg also on account of its even greater richness in these important constituents. Half of the yolk of one egg may be given daily, raw or lightly cooked, and either by itself or shaken up with the milk. Raw meat-juice—not one of the bottled juices—may also be given with advantage in quantities of $\frac{1}{2}$ to 1 oz. daily, especially in cases complicated by anæmia. In children of eighteen months and upwards a little pounded underdone meat may be given instead. Next in importance to diet in rickets is the general *hygienic treatment*. The importance of fresh air and sunlight especially cannot be over-estimated, and if possible the child should be removed to a locality where these health-giving influences can be had in greatest abundance. Chills, to which rickety children are, from their tendency to profuse sweating, specially liable, should be guarded against by warm woollen clothing both by day and night. The tendency which such children have to kick off the bed-clothes renders it necessary to see that they are provided with such a complete suit of night-clothes as to render them independent of any other covering.

In *medicinal treatment* cod-liver oil takes the first place. My own impression is that its value consists simply in its being an easily assimilated form of fat and not in any more recondite virtues. During the last two years, when the price of cod-liver oil has been so much raised, I have used as a substitute for it in hospital practice an emulsion prepared from cotton-seed oil with the addition of 6 per cent. oleic acid. Children take this well, and I am as sure as one can be of almost anything in therapeutics that it has given as good results as cod-liver oil itself.

In cases in which anæmia is present the addition of iron to cod-liver oil is undoubtedly useful, and I am in the habit of exhibiting the two drugs in the form of the preparation known as ferroleum.

Phosphorus has obtained a considerable reputation in the treatment of rickets on the Continent, but has never been very popular in this country. It is given dissolved in oil (cod-liver oil, almond or olive oil) in doses of $\frac{1}{200}$th gr. twice a day. Care must be taken that it is thoroughly dissolved, otherwise it may fall to the bottom of the bottle and the last doses prove toxic. Indeed, some cases of what looked very like phosphorus poisoning have been reported in rickety children who were undergoing the phosphorus treatment. I used at one time to prescribe phosphorus pretty regularly, but although I cannot say that I ever knew it to do any harm I am by no means convinced that the improvement which followed its use was not due simply to the oil in which it was dissolved. Various organic preparations of phosphorus have been suggested instead of the free element, such as phytin (a vegetable compound), protylin (a synthetic preparation of albumin and phosphorus) and fersan (an albumin-compound of phosphorus and iron), but I do not think that any of them is superior to lecithin. The latter has been recommended by Italian writers for intramuscular injection in rickets, but I do not consider that the inconvenience of the method and the pain which it causes are made up for by any advantages which it is supposed to possess. I may remind you that lecithin is one of the chief constituents of yolk of egg, and it is in that—its most natural form—that I prefer to administer it. I need say nothing of the use of lime salts in the treatment of rickets, for this method is now, I think, discredited, and in any case compounds of calcium are so abundantly present in a natural form in the constituents of any well-considered anti-rachitic diet that their administration as drugs would be quite superfluous.

Treatment of special symptoms and complications.—One of the most troublesome of the minor symptoms not uncommonly exhibited by rickety children is a profound loss of appetite. So long as this is present it stultifies our attempts to cure the disease, for there is no use in

endeavouring to treat a rickety child by diet when it obstinately refuses to eat anything at all. This symptom is sometimes met with in children who have been kept too long on the bottle, and in such a case it is essential to break the "bottle habit" without delay. This cannot always be done without a good deal of passive or even active resistance on the part of the devotee of the bottle, but it is a case in which one must steel one's heart against lamentations—infantile and maternal—and insist. In cases of anorexia in which the child is already off the bottle one may try the effect of alkalies and bitters, and, if there be constipation—as there often is—of "hepatic" aperients such as rhubarb and grey powder, but all these often fail. In such circumstances there is nothing, in my judgment, to equal change of air, preferably to the seaside, which will often restore the desire for food as if by magic.

The catarrhal manifestations of rickets—such as bronchitis and chronic diarrhœa—may call for special treatment. In bronchitis I avoid cough mixtures as far as possible and trust to cod-liver oil internally and a stimulating embrocation externally. Chronic catarrh of the intestine must be treated on general principles, but I would lay stress on the importance of avoiding chills by seeing that the abdomen and legs are warmly covered, for I feel sure that Dr. Eustace Smith is right in attaching so much importance as he does in his writings to the part played by chill in keeping up chronic diarrhœa, especially in rickety children.

I think it will be the experience of everyone here that the rickety child is as prone to suffer from a peculiar form of diarrhœa, characterised by the large size rather than the frequency of the stools, which are also pale in colour, foul-smelling, and with a special tendency to be discharged immediately after a meal (lientery). There can be no doubt that recovery from rickets is often retarded by this state of the bowels, and it must be remedied before other measures can take effect. In the treatment of this state of things, I believe opium to be our sheet anchor, one

minim of the tincture being given three or four times a day. It may be combined with a carminative mixture if there be much flatulence, or with small doses of rhubarb and soda.

Neuroses which complicate rickets, laryngismus, tetany, and convulsions are best dealt with by treating the rachitic condition which underlies and predisposes to them by the means above pointed out. The effects of such treatment, however, are, of necessity, not immediate, and meanwhile one may be obliged to use nerve sedatives. Of these I believe chloral to be the most effective. It is well borne by children, and for a child of a year old twenty minims of the syrup of chloral thrice daily is none too large a dose. The more I use chloral the more convinced do I become of its value in such cases. Cold douching—applied after the bath—is a valuable adjunct, especially, I think, in cases of convulsions.

The osseous deformities of rickets may usually be safely left alone. They have an astonishing way of rectifying themselves in time, and at most it may be necessary to apply light splints to the legs chiefly in order to prevent attempts at walking. Surgical interference is rarely, if ever, called for. (*Read December the 14th*, 1906.)

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32. RICKETS—DISCUSSION.

The Chairman (**Dr. Edmund Cautley**) said that various points naturally arose out of the papers which had been read which would well repay discussion, and he desired to draw special attention to the excellent specimens which Dr. Milligan had brought forward. Dr. Hutchison had attached considerable importance to the relationship between the different constituents of the diet and their effect in the production and the treatment of rickets. He also spoke of the effects of deficient and prolonged lactation. Perhaps some of the members had travelled in Japan or India, and, if so, they might give the Society the results of their observations in connection with the prolonged

lactation seen in those countries, and also on the results of the carbohydrates which were given so freely to coolie children.

Dr. Alexander Morison said it had not been his intention to join in the discussion; he came to learn, and had learned a great deal. But he wished to speak on a point which had not been dealt with in the paper on ætiology. He had seen numbers of children affected with rickets, not only *en masse*, but children of the same family, and he thought the conclusion was justifiable that while one admitted that malnutrition was the cause of the condition, there was some family peculiarity which accounted for much. One saw children of other families equally poor and equally neglected, who did not develop the condition; and, in addition, there was the fact that children of the better classes did not go free. Though it might be accidental, he thought there was some predisposition in certain families to rickets, in the same way that there was a tendency in some to tuberculosis. He would like to hear whether it was the opinion of members that there was some such predisposition. One speaker dealt with the vascular conditions and changes in rickets. He (Dr. Morison) had never been able to convince himself that rickets, as such, ever originated an endocarditis leading to persistent valvular conditions, although one saw displacements of the heart relatively to the chest wall consequent on the distortion of the thorax.

Dr. William Ewart's remarks had reference to the dietetic and the medicinal treatment. With regard to dietetics, as stated by Dr. Morison, infants might be practically starved without getting rickets, and it was clear that mere absence of food was not answerable for the causation. Again, rickets might develop in a child which was over-fed; but in the great majority of cases, while the diet was not luxurious it was far removed from starvation diet. Too much stress had, perhaps, been laid on the kind and quality of the ingesta. It was surprising how much Nature would do to preserve life on unusual aliments provided digestion was in good working order. But if it was out of order, although the food might be of the best, the body might not be any the better for it. That was probably what happened to the rickety infant when it was fed on milk. What was the good of the milk if the child did not digest it? What was the good of the lime in it if it passed out as a clot *per rectum*? He was glad to hear Dr. Hutchison speak well of yolk of egg. He had himself given it, and for a number of years had advocated its use. The first endeavour should be to restore the digestion, and then the child would thrive. If the disease were directly due to the kind of food taken, the child, when admitted into the hospital and put on the proper food, might have been quickly expected to have got well; but that was not by any means always the case. The persistence of such

symptoms as feverishness, and sweating of the head, seemed to point to some persisting toxic influence. Some important experiments had recently been made by Dr. Chalmers Watson, of Edinburgh, in which he showed that by forcing an exclusive meat diet in young rats it was possible to modify the growth of the body, of the bone, and of the circulation in the bone. This seemed to suggest the possibility that some relatively toxic element had been introduced. In rickets, where the digestion was at fault, and the toxic influence probably of pelvic origin, the first and the permanent indication was to clean out the alimentary canal, as mentioned by Dr. Hutchison. The medicinal treatment was partly mixed up with the dietetic, the chief medicine which had been recommended, cod-liver oil, being in itself a food. It was probable that the cod had not much to do with the special virtues of the remedy. Some thought it was the liver from which it came which was of importance. But for his own part he attributed the benefit to the oil itself both as a food and as a medicine. As a food it probably acted as an economiser of that which was being too heavily drawn upon, the nitrogenous supplies required for the growth of the body itself. As a medicine its efficacy even, as Dr. Hutchison had noted, in diarrhœa was due, in the speaker's opinion, to the fact that it swept and cleaned the mucous membrane, and helped to restore its disabled functions. It did not follow that because laboratory work had shown that milk contained even more lime than was required for the organism a sufficient amount of lime would be assimilated from the milk. The presence of milk coagula in the fæces precluded any such conclusion. Inasmuch as what treatment was the best to use, he found—and that was, doubtless, the experience of others—that lime and phosphorus did not do the children any harm ; he would rather be on the safe side and give an additional supply of these elements and let the economy take whatever good it could out of them. Moreover, when given partly in the form of carbonate the lime acted as an antacid, and thus tended towards ease of digestion. Dr. Morison had referred to the question as to any relationship between phthisis and rickets, but that was too large a subject for him to enter upon, except to say that rickets, the causation of which seemed to be partly toxic, did not appear to lead to any severe lymphatic irritation.

Dr. E. I. Spriggs said Dr. Ewart had referred to the experiments of Dr. Chalmers Watson, and the impression forced upon his (Dr. Spriggs') mind was, that Dr. Watson was feeding the animals on a lime-free diet. It was known that in animals fed on such a diet certain changes occurred in the bones, though these were not regarded by most authorities as identical with those found in rickets. No interference with calcium metabolism had been definitely proved in clinical cases of rickets. Experi-

ment had shown that although the bones in rickets were deficient in calcium, yet in animals which had been fed on calcium-poor diet the tissues as well as the bones were deficient. The various results obtained were to some extent contradictory. This was perhaps due to the extreme slowness of the alterations in metabolism in this disease. He thought that a low proteid diet was not alone a common cause of rickets, for rickets was much more likely to occur in children fed on cow's milk than in those fed on mother's milk, whereas human milk had a lower proteid content; and although cow's milk was often diluted until it contained as little proteid as human milk, yet this was not usually the case at the age at which rickets came on. It must be agreed that fat was an important factor in treating rickets. He usually advised the parents of such children to give them dripping, not because he thought it was superior to cod-liver oil, but because, except in cases of actual destitution, it was most important to impress on the parent the responsibility of feeding the child. There was often a feeling that if the child had cod-liver oil it need not be given so much food. When he first saw out-patients at the Victoria Hospital he gave the children no drug at all, but encouraged the mothers to give them plenty of fresh air, to take them out, and give them dripping and cod-liver oil, and was satisfied with the results. Later for a time he gave all the children calcium hypophosphite, but he was not sure that any good followed; hypophosphites are now known to be excreted unoxidised in the urine, and any pharmacological effect was due to the base. He now gave the mothers hygienic and dietetic advice, and the children phosphate of iron, which he regarded as an excellent drug. He agreed that the dietetic treatment was of most value, but thought hygiene was important. Although children in apparently good conditions sometimes had the disease, it must be remembered that many well-to-do people did not have their windows open.

Dr. G. A. Sutherland thought the debatable points in the discussion in connection with rickets were largely those concerned with treatment. So far as one could learn from the papers on the ætiology and the pathology, there had not been much new discovered about the condition in recent years. Dr. Poynton asked about pain and tenderness in the limbs. He (Dr. Sutherland) had looked into that point for some time past, as it was said in books that rickety limbs were tender and that pain was often present, but he had concluded that pain was not present, and that if there were tenderness one had reason to suspect scurvy. He believed the statement arose from the fact that the limbs of children suffering from rickets were extremely weak, and that if those children were handled roughly they suffered pain. Dr. Hutchison had brought up many points. He was surprised and sorry to hear from him that at the London

Hospital the treatment varied with the price of drugs, and that when cod-liver oil rose in price they promptly changed to cotton-seed oil. Not only so, but they were so satisfied with it that they had continued its use. It was a very important matter if equally good results could be obtained from cotton-seed oil, and he hoped proof of that would be forthcoming. Many would be pleased to have it proved that such was the case, quite apart from the question of price, which was not at the present time a very important matter. Dr. Hutchison also suggested that the deficiency of proteid was a very important matter, as well as the deficiency of fat. That, he thought, was capable of verification or the reverse. His own experience was that if one gave rickety children a considerable quantity of raw meat-juice, as one often did for the anæmia, the anæmia might be improved, but not the rickety condition, in the same way as when fats were given in addition.

Dr. W. J. Midelton (Bournemouth) said that in the case of one child, he kept it on yolk of egg and cod-liver oil from the age of a fortnight to six weeks.

Mr. Francis Jaffrey was pleased to hear Mr. Robinson say that he never operated for the condition under five years of age. He agreed with him in that. Under that age he believed they could be treated well with splints and would get well soon. Mr. Robinson also said he never operated upon active rickets, and he (Mr. Jaffrey) believed no one would suggest operation while the active rickets was in progress. With regard to the use of the chisel or the saw in such cases, he believed chisels in the present age were very difficult to use, not because chisels were blunter, but because the aseptic tables were so extremely elastic that the same amount of purchase was not obtained as with a stiff table. He knew the tables at St. Thomas's were good ones, and recently there had been procured at St. George's some like them. With regard to the accident which had been mentioned, when operating on a child at the Belgrave Hospital recently the chisel jumped and buried itself in the sandbag on the opposite side, but fortunately did no damage to the tissues. It did not seem as if one could get an osteotomy to go septic; he had never had one do so in all his operations.

Dr. Porter Parkinson said it had not been his intention to speak, but he had heard the word "splint" used with regard to the treatment of some rickety deformities. One must divide the rickety deformities into those due to general causes, such as the undue weight of the child, and others in which there was deformity due to muscular action; and it seemed to him that many of those deformities might not only be prevented, but even sometimes cured, by judicious massage. This was likely to improve the nutrition of the muscles, as well as possibly to lessen the rickety deformity. When a child was sent out and put on a splint, there might be some effect produced upon the bone, but

he thought that was somewhat problematical. More could be done by massage, supplemented by douches, etc., thus improving the circulation and the tone of the muscles. When such children were treated by splints many of them were in a worse condition as regards the muscles than before. In later cases, no doubt, the condition had gone too far for splints to be of any avail. He considered the only use of splints was to prevent the child attempting to walk and so increasing the deformity.

Mr. Milner Burgess (Harlesden) said there was a point in the treatment which Dr. Hutchison had not touched upon, but which he, Mr. Burgess, regarded as important, namely, the necessity of warmth for rickety children. It was the suggestion of Dr. Eustace Smith, which he, Mr. Burgess, had carried out, and with very good results.

The meeting then terminated.

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33. PROTECTION OF RHEUMATIC CHILDREN.

By C. O. HAWTHORNE, M.D.

The brief note which I now submit to the Society concerns itself with this essentially practical question. Can anything be done to prevent or limit the occurrence of cardiac disease in children who are known to be liable to such disease as the result of a rheumatic proclivity or inheritance? It needs no presentation of figures in a Society specially concerned with the clinical and pathological misfortunes of childhood to secure a recognition of the appalling frequency with which valvular and other forms of organic heart disease find their victims among those of tender years. The repetition of such a discovery in the individual patient is a constantly recurring experience, and this in private practice not less than in the out-patient departments and wards of our children's hospitals. Nor is it necessary to picture the consequences which attend this grave disaster. A life of limited activity and diminished usefulness is the least of the penalties which this disabling disease almost inevitably inflicts. Further, the acuteness and pathos of the situation are frequently heightened by the statement, often conveying a note of

protest, that the child's life-history has been almost or altogether free from any incident calculated to awaken suspicion in the minds of the parents that serious mischief was afoot. Some relatively slight febrile illness, or a local disturbance of apparently trivial import, may be admitted, but surely these, it is urged, cannot have meant something so serious as the risk of organic heart disease. Such is the argument that not unnaturally seems valid to the general public, to whom the rheumatism, which means the risk of heart disease, is a more or less acute illness accompanied by pain and swelling in a greater or less number of the joints. The medical profession, however, is compelled to an entirely different view, namely, that irreparable damage is frequently inflicted on the cardiac tissues by the rheumatic poison, almost or altogether apart from incidents popularly recognised as rheumatic. Can anything be done to save or modify so disastrous a situation? Now, thanks to the teaching more particularly of the last twenty-five years or so, the profession generally has come to recognise that rheumatism in childhood presents a much more varied symptomatology than does the same disease in adults. While shutting out from the category of rheumatism many joint conditions which were formerly so labelled, medical opinion in modern days has extended the borders of the disease so as to include a number of events, the rheumatic origin and nature of which were previously unsuspected. And it is in the early years of life more especially that these events occur. Chorea, erythema, tonsillitis, some forms of pleurisy, subcutaneous nodules, slight pains in the joints or other parts, not to mention more dubious occurrences, are all, to the medical judgment—at least, frequently—manifestations of the same disease which appears in adults as, for the most part, an acute poly-arthritis. And certainly with these forms of rheumatism there is not less, probably indeed much more, than with the rheumatic fever of the adult, a definite risk of cardiac disease. In brief, the general attitude of professional opinion towards rheumatism is, that in the adult the disease

expresses itself largely as an acute polyarthritis, whilst in the child it occurs mainly in non-arthritic forms; and that with each and all of these, and more especially with the non-arthritic manifestations, rheumatic heart disease is a possible incident. Now this disproportionate frequency of heart disease in rheumatic children, as compared with adults suffering from the influence of the same poison, may reasonably be regarded as associated with a difference which obtains between the two contrasted conditions in relation to the practice of rest. Everyone admits that, in the present state of our knowledge, it is to early, to complete, and to sustained rest we have to look as the most efficient means of preventing the development of cardiac complications in the course of a rheumatic attack. Such a discipline in the actively rheumatic adult is imposed, almost inevitably, by the severity and site of the pain. He is driven to bed, and to remain there, because the condition of his joints leaves him no other option. But the rheumatic child, even during an active phase of his disease, often suffers little or no pain, and thus circumstances permit him to escape the rest which an acute polyarthritis invariably demands. Is it not probable that in this difference is to be found, at least in large degree, an explanation of the relative frequency of heart disease in early life? Let this be granted, and it at once becomes obvious that the protection of these children can only be accomplished by the provision of an arrangement which will secure for them not less than the same measure of rest which the disease itself compels in the acute polyarthritis of the adult. But no such end is possible so long as the public is unaware of the fact that rheumatism in the child is often, or even usually, a disease which avoids the joints, and occurs in the shape of various non-arthritic disturbances that, to the uninstructed, may readily appear to be altogether trivial and unimportant. If the protective influence of rest is to be obtained during such disturbances, the parents or guardians of rheumatic children must be made aware of their true nature, and of

the serious risk in the shape of heart disease which they carry. In other words, the public, or at least those members of the public who are responsible for the care of children having a rheumatic inheritance, must be educated to appreciate the clinical characters which rheumatism assumes in childhood, the special danger to the heart which these involve, and the urgent necessity for complete and prolonged rest if such danger is to be avoided or minimised. Until this position is attained these unfortunate children will continue to be deprived of the one influence by which, possibly, they may be saved from supreme disaster. But such a position cannot be attained without the direct and active intervention of the medical profession, with whom rests both knowledge and opportunity. With them also, therefore, rests responsibility. If all this is true, it follows that the discovery of rheumatic manifestations in any patient demands from the medical practitioner immediately concerned the discharge of a much wider responsibility than the care of the individual sufferer. And particularly does this responsibility extend to those members of the family in whom, on account of their age, rheumatism is prone to occur in its more subtle, and therefore, so far as the heart is concerned, its more dangerous forms. To put the position in specific terms, the discovery of signs or evidences of rheumatic disease in any family ought to be the occasion to convey to the parents, as an imperative professional duty, information and warning of the special risks which even slight illnesses may involve for their children, and of the importance of prompt and complete rest as a means of avoiding these risks. Let this be done regularly and systematically by every member of the profession on the first discovery in any family of signs of a rheumatic inheritance, and there will be some chance of gaining for young children the protective influence of rest during these apparently slight, but essentially dangerous, manifestations of rheumatism which are common in early life. And with this, it is reasonable to believe, there would be some, and possibly a con-

siderable, diminution in the incidence of organic heart disease in early life. What the future may have in the shape of prophylaxis or treatment we do not know. At present the one influence on which we depend for the prevention of heart disease in rheumatism is absolute rest so long as the rheumatic poison shows signs of activity. The benefit of that influence ought to be secured for rheumatic children. But it can only be secured by the deliberate adoption by the entire body of the profession of the policy here advocated. This policy ought, therefore, to be accepted as an imperative and universal obligation—the one opportunity which exists, amidst our present ignorance, of protecting rheumatic children from the profound misfortune of organic cardiac disease.

(*Read January the 18th,* 1907.)

Discussion.

Dr. Porter Parkinson said there was little doubt that the same views on the subject would be held amongst a society of medical men as those which Dr. Hawthorne had so well expressed. The difficulty was to persuade the general public, both hospital patients and others, of the need of rest. In London hospitals, owing to the number of illnesses met with, it was impossible to give such patients sufficient rest, and there was reason to fear that when they were sent to their own homes, the mothers did not give the care to the instructions as regards rest as they were enjoined to. He was sure the same thing occurred in the more favoured classes. The public required educating up to it, and until that had been done it seemed hopeless to expect the amount of heart disease which was prevalent would be lessened. Two years ago, when speaking of the medical diseases of school life before the Society of Hygiene, he tried to insist on the necessity of the children being kept away from school and supervised at home, but nothing was likely to come out of the suggestion, because the school board people were not likely to take any notice of such remarks.

Dr. William Ewart said there were two great plagues in the country, consumption and rheumatism. The treatment of consumption had been taken up but rheumatism had been neglected, though hardly less important to treat and to suppress. In both those diseases the approved principles of treatment were exceedingly wide. Consumption was to be cured by "open air," though there were those who considered that something more was

required; and the worst evil of rheumatism, the rheumatic heart complication, was to be cured, if possible, or at least prevented, by "rest." Some, however, thought that something more was required. There was quite a class of patients whose rheumatism arose from them not having sufficient exercise. There were those also of a most acutely rheumatic disposition who suffered repeated attacks, even as many as five or six, and yet preserved a clean bill of health as regards the heart. Rest was not enforced with them more than in the generality of cases; and it failed too often to help the latter. These facts suggested a wide difference in susceptibility, or else in the characters of the infection; and the nature of these differences called for further investigation. The question seemed to be essentially one as to toxines, microbes, and resistance; and in that case more good might be done by devoting to research the money which it was proposed to expend in procuring rest.

Dr. F. J. Poynton said he felt himself in full agreement with Dr. Hawthorne. He thought a point one required to know more about was the influence of sore throats in board schools and other schools on the incidence of rheumatism, and he would welcome clear statistics on that point. Whatever might be the cause of rheumatic fever, it apparently entered by the throat in very many cases; there was first a tonsillitis, and then the child got rheumatism. When there were a number of bad throats about the schools, rheumatic children were especially liable, he thought, to develop such throats and to develop rheumatism. And, if the matter could be investigated, it would be interesting to know what was the influence of the cheap flats and villas being so rapidly put up, and which were not really dry before they were occupied, on the disease. He had had many cases under care in his out-patient department for seven or eight years, but the attempt to prevent rheumatism had been, on the whole, very unsatisfactory. The prevention of rheumatism was a very difficult matter, and if Dr. Hawthorne could state some definite way of stopping it, he would have done a very great service.

The Chairman (**Mr. George Pernet**) said Dr. Hawthorne referred in his paper to erythema. There was a variety of toxic conditions in children which might give rise to erythema, and at the same time to pains in joints and muscles. One constantly heard such cases spoken of as rheumatism, but they had no relation to that disease. All the symptoms had to be taken into consideration before a diagnosis of true rheumatism was made. By some, erythema nodosum was regarded as certainly rheumatic in origin, but from recent research it appeared that it was a disease absolutely distinct, a disease *sui generis*.* Again, was

* See H. Schulthess, in 'Correspondenz-Blatt des Schweizes Aerzte,' 1895, No. 3; also an instructive clinical contribution to the subject by Lendon (of Adelaide), "Nodal Fever" (Febris nodosa), London, 1905.

there really such a thing as rheumatic inheritance? The ideas about inheritance were simply chaotic, and to speak about a rheumatic inheritance was assuming a good deal.

Dr. J. S. Mackintosh (Hampstead) said he was a dweller in one of those districts where new houses and flats were being rapidly erected on a clay soil, and which became full of young children in a short time, but he had not seen anything to suggest that rheumatism was more common in those than in old houses. He had listened very intently to Dr. Hawthorne's paper, and would like to hear how he could keep a child at rest. He (Dr. Mackintosh) had not yet found a way of doing that. If the child were put to bed it was like a horse in a stall; in a week one could not hold it. If rest was to be secured, it was necessary to have an attendant specially detailed off for the purpose; the mother usually could not give the necessary attention. Of course, the matter was an easier one in hospital.

Dr. C. O. Hawthorne, in reply, said that the discussion had taken a somewhat wide range. His paper came under the ten-minutes' rule, and therefore it was necessary for him to confine his remarks to a very narrow point. The emphasis which he wished to make was, that, on the discovery of rheumatic incidents in any family it was the duty of the medical attendant to advise the parents that other of their children might suffer from rheumatism in various non-arthritic forms, all carrying a risk of heart disease, and that to avoid this risk such children should be healed by complete rest, even during apparently slight illnesses. But was that the practice generally adopted? If so, he was glad to hear it. The point did not appear in text-books; and there were lectures on rheumatism and cardiac disease in children which did not mention it. To him it seemed a necessary measure of precaution, and so he had ventured to bring it before the Society.

34. A CASE OF VOLVULUS OF THE SMALL INTESTINE ROUND A CASEOUS GLAND IN THE MESENTERY OF A CHILD AGED SEVEN YEARS. ENTERECTOMY.

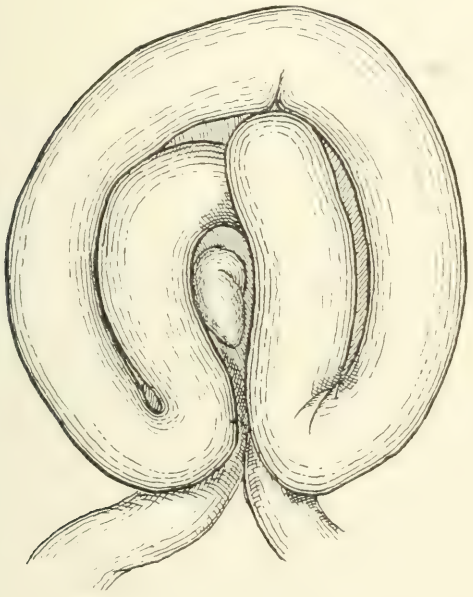
By P. LOCKHART MUMMERY, B.C.

R. F—, a rather weakly-looking boy, aged 7 years.

The child was sent up to the North-Eastern Hospital for Children as a case of acute appendicitis. There was a

history of a cough for some weeks, but otherwise the child had been in fair health until 6.0 a.m. on the day before admission into the hospital. The child had then complained of acute pain in the abdomen, chiefly on the right side. Two hours later he was sick, and he continued to be sick at frequent intervals throughout the day. There was no action of the bowels, though they had been well opened the

Fig. 14.



day previously. The pain continued next day, but the child was only sick twice during the morning. A doctor was then sent for, and the child sent up to the hospital in the afternoon.

On admission.—The child looked ill and seemed to be in pain; the face was flushed and anxious, the pulse rapid and running, and the breathing hurried. There was no vomiting while in the hospital. There was some evidence of bronchitis in the lungs.

The lower part of the abdomen did not move on respiration, and there was tenderness. In the right iliac fossa a large firm swelling could be felt. The swelling was round and well defined; it was dull on percussion, though the rest of the abdomen gave a resonant note. There was very marked tenderness over the swelling. The skin over it was not red. There was no distension of the abdomen.

Per rectum nothing definite could be made out.

The pulse was 130 and the respirations 40 to the minute. The temperature was raised. The child was obviously very seriously ill, and everything seemed to point to an acute abscess in connection with the appendix.

The operation was performed about 6.0 o'clock under chloroform.

I made a small oblique incision over the swelling, intending simply to drain the abscess. On opening the peritoneum blood-stained serum escaped, and a large blue-black mass could be seen in the abdomen. This proved to be a large coil of semi-gangrenous small intestine. After enlarging the incision this was seen to be a complicated volvulus of the small intestine close to the cæcum, and in the centre, at what appeared to be the neck of the volvulus, there was a large, hard, caseous gland about the size of a hazel nut. The bowel was not entirely gangrenous, but was on the point of giving way at several points, and it was not possible to untwist it without the certainty of tearing it. There was no choice, therefore, but to resect it. Clamps were put on the bowel on each side, and the whole strangulated loop was cut away. The cut ends of the bowel were then united with a Murphy's button as rapidly as possible. The abdominal wound was stitched up, a small rubber drainage-tube being placed in the lower angle of the wound.

The child stood the operation well, and seemed better after the operation, but gradually got weaker and died next day.

The loop of bowel, even after it was removed, could not be untwisted without considerable difficulty. There were

several gangrenous patches in different places, though the loop as a whole was not gangrenous.

The case seems to me interesting on account of the close similarity, from a clinical point of view, to appendix abscess. The classical symptoms of acute obstruction of the small intestine were not at all prominent. Though vomiting was a marked feature during the first twenty-four hours it did not become progressively worse, but, on the other hand, had ceased when the child came to the hospital, and at no time was it fæcal in character. Also there was no distension of the abdomen at all. The swelling in the right iliac fossa very strongly suggested an appendix abscess, and the fact that it was dull on percussion supported this view. Volvulus of the small intestine is a very rare condition, and especially so in children. What part the caseous gland played in the formation of the volvulus it is difficult to say, but the appearance seemed to suggest that the twist had occurred round it.

(*Exhibited January the* 18*th,* 1907.)

Discussion.

Mr. Frances Jaffrey said he had seen a case in an adult somewhat similar, but it was not a volvulus. There was acute obstruction of the small intestine over a calcareous gland. The gland was very prominent, and stood up like a rock in the middle of the abdomen. The gland was shelled out and the distension relieved.

Mr. Henry Skelding (Bedford) said he was of opinion that these cases occurred more frequently than was suspected. In one he saw two years ago the patient died shortly after admittance, and post mortem there was a very similar condition to that now described. The gland was very hard, not caseating, and about the size of a tangerine orange. He thought many cases of mild obstruction in children might be due to enlarged mesenteric glands. Probably many of them were treated medically. The gangrenous condition in the present case seemed to have been extremely rapid. He would like to know whether it was Mr. Mummery's usual practice in a rapid case of the kind to use Murphy's button.

Mr. Lockhart Mummery, in reply, said the rarity consisted in volvulus of the small intestine. The calcareous gland did

not appear to cause the obstruction, but it appeared to be a reason why the bowel got twisted; by narrowing the mesentery it allowed the small intestine to twist on itself. He agreed that, in children especially, the use of Murphy's button was bad practice as a means of uniting the intestine; but in this case the chance of getting the child off the operating table alive was so excessively small that anything further in the nature of stitching was out of the question. The volvulus was very close to the cæcum, and one could not have brought the end of the small intestine out of the abdomen, and he did not think the matter would be improved by putting in a Paul's tube. The choice of evils seemed to be to put in a Murphy's button, and then, if the child got over that in a week, to do a more definite operation. The onset occurred in thirty-six hours, and the greater part of the bowel was gangrenous, so he chose the course which could be carried out most rapidly.

35. DILATED STOMACH IN A BOY, AGED TWELVE YEARS.

By C. O. HAWTHORNE, M.D.

The patient was a somewhat delicate-looking lad, aged 12 years, who had been at occasional intervals under the observation of Dr. Douglas Cree. According to the boy's mother the only ground of complaint was "swelling of the stomach" in the latter part of each day; this had been noticed for several years. There was no history of vomiting or of painful or defective digestion. On distension of the stomach the lower border was seen to be down to the level of the umbilicus, and there was visible peristalsis; the latter fact was sometimes present apart from artificial distension. The exhibitor suggested that the case might be one of congenital pyloric narrowing of a much less marked degree than that which gave rise to the cases recognised in early infancy.

(*Exhibited January the 18th,* 1907.)

Discussion.

Dr. F. J. Poynton asked whether there had been any history of catarrhal gastritis before the age of three, because he believed that there were sometimes obstinate cases of atonic dilatation of the stomach which followed upon acute catarrhal gastritis, and which had lasted a good many years, particularly if they had not been very well looked after by their parents.

Dr. G. A. Sutherland said it was very rare to meet with a case of the kind just described in a child, because there had been not only dilatation of the stomach there, but visible peristaltic movements of the stomach going on. So the case seemed to be outside the category of pure atonic dilatation. With such peristalsis present one might conclude almost certainly that there must be definite interference with the normal dilatation of the pylorus, and, therefore, he agreed with Dr. Hawthorne that stenosis was probably present in this case. It was difficult to state what had caused the stenosis, as there was no clear history of any early symptoms, such as one would expect in even a modified case of congenital pyloric hyperplasia. If the condition at birth, and soon after, had been severe enough to keep up persistent dilatation, one would imagine that in the early months there must have been some definite vomiting and wasting. But there was no such history in the case. The other possibility was that there might have been some form of ulceration about the stomach. Such ulcers had been heard of in the Society, and they had not been very common. Perhaps the most common form was the tuberculous. In the first three years of life the child might have had some abdominal tuberculosis, and that one of the lesions might have been some ulceration about the stomach, which led to narrowing, or some adhesions about the pylorus. If there was any further evidence bearing on the case he hoped Dr. Hawthorne would report it. He understood he was not inclined to have an operation done, but surely if there was permanent stenosis of the pylorus he would be almost compulsorily led in time to seriously consider operation, because if a child had dilatation of the stomach to that extent it could not be expected to go on digesting and absorbing its food in the efficient way it should. He said that while agreeing that the less surgery of the stomach was carried on at that age the better.

Dr. J. S. Mackintosh (Hampstead) said the case had interested him very much, as he had been following up for some time the question of gastric dilatation in children, and his experience was that it was a common condition. But he had never seen one so dilated as that just shown by Dr. Hawthorne. It was almost invariably associated with adenoid growths, and these the present child apparently had at the age of four. If removed at that age, they must have been producing considerable symptoms, and they

frequently recurred when removed so young in spite of the most careful operation. The result of adenoid growths as affecting digestion had not been followed up as thoroughly as it might have been. Such a child had obstruction in the nose, therefore when he tried to masticate he had to gulp his food down, to enable him to take a breath, as he was breathing through his mouth. So that the child badly digested starch. He also had a nidus for all sorts of bacteria in his adenoids, which were often very evil-smelling after removal. In a child who had had dilatation of his stomach for some years and still snored, and was deaf, he would suspect that adenoids had returned, and he would recommend that any operation in the present case should be on the naso-pharynx. Occasionally one found a considerable degree of pyloric spasm associated with acid fermentation in the stomach, and he suggested that spasm might have reached an unusual degree in the present case, and that there was no organic obstruction.

Dr. C. O. Hawthorne, in reply, said he was sorry he could not answer Dr. Poynton's question definitely. He could only say that according to the mother the child was perfectly normal and healthy until it was three years old, when she began to notice distension of the abdomen. The absence of history told in both directions. It was as difficult with such a history to believe that the child had acute gastritis, as it was to accept the view of a congenital obstruction of the pylorus. He agreed with Dr. Sutherland that at present no operative measures should be undertaken: the boy was fairly well nourished, he did not vomit, and there were no alarming symptoms. Therefore he thought the present procedure should be continued. Possibly the future might show that operation was necessary. The suggestion of the relation between adenoids and pyloric obstruction was new to him.

36. OPERATION FOR EXTREME DEPRESSION OF THE FRONTAL BONE.

By C. O. HAWTHORNE, M.D.

This was the patient shown to the Society on October the 19th, 1906. An operation had been performed by Mr. Herbert Pendlebury, and the result was in every way satisfactory.

(*Exhibited January the* 18*th*, 1907.)

37. DIABETES INSIPIDUS.

By EDMUND CAUTLEY, M.D.

Nellie S—, aged 8 years and 11 months, has been under my care in the Belgrave Hospital for Children since December the 1st, 1906. She is the seventh of nine children. All the others are well and the parents are healthy.

The child has had measles, pertussis, and varicella.

History of present illness.—For two years she has had enuresis nocturna. For one year she has been losing flesh. For six months the enuresis has been diurnal, and she has had thirst and a large appetite.

On admission.—She was a very thin child, with a dry, dark skin. The tongue was dry and slightly furred. The teeth were carious. Constipation was marked and fæcal lumps could be felt in the abdomen. Palpable glands were present in the neck, axillæ and groins. The reflexes were active.

Her mental state was peculiarly dull and drowsy. The urine was copious, light coloured, of low specific gravity, and contained no albumin or sugar.

Course.—The child was kept in bed. Gradually the mental state improved and she is now quite bright and intelligent. The appetite was very bad at first and is now about normal; it has never been at all excessive.

At first there was much thirst, but that has somewhat decreased. Constipation was relieved by two grains of aloes pill, three times a day. The table shows the variations in the amount of fluid drunk and urine passed.

The effect of drugs was slight. Adrenalin and atropin were quite inefficacious. The child was then put on pills containing valerianates of iron and quinine, strychnia, rhubarb, and extract of gentian. These were begun on January the 4th, and certainly caused a marked improvement in the general health, with less thirst and less urine.

The amount of urine depended largely on the amount of fluid taken, and the degree of thirst seemed to depend considerably on the general health.

Subsequently to being shown at the Society the child was put on a salt-free diet for a fortnight, but apparently without any effect on the amount of urine. A reduction in the amount of proteid in the diet did not appear to have any effect.

Date.	Weight.	Fluid taken in ounces.	Average.	Urine.	Average.	Notes.
	lb. oz.				oz.	
Dec. 2–6	43 9	—	—	—	60	Taking very badly.
„ 7–11	41 9	—	—	—	139	Adrenalin given.
„ 12	—	148	—	202	—	—
„ 13	41 9	166	—	144	—	—
„ 14	—	160	—	188	—	—
„ 15	—	148	—	170	—	Sp. gr. 1005; urea 0·5 per cent.
„ 16	—	166		194		—
„ 17	—	92	—	116	—	—
„ 18	—	124	143	120	162	Atropine begun; urea 0·5 per cent.
„ 19	—	154	—	186	—	—
„ 20	42 2	196	—	262	—	Urea 0·9 per cent.
„ 21	—	136	—	184	—	—
„ 22	—	130		138	—	—
„ 23	—	106	—	112	—	—
„ 24	—	130	—	146	—	—
„ 25	—	96	135	108	162	—
„ 26	—	96	—	130	—	—
„ 27	—	?	—	100	—	Urea 0·65 per cent.
„ 28	40 0	107	—	100	110	—
Dec. 29–Jan. 4	39 10	616	88	—	94	Jan. 4: Valerianates.
Jan. 5–11	40 8	736	105	702	100	—

Comments.—Before accepting a diagnosis of diabetes insipidus as correct, a most careful examination is necessary. The polyuria which results from excessive drinking, "polysitism" or "polydipsia," must be excluded; so, too, the frequent micturition due to cold, emotion, local irritation, and hysteria. Polyuria may occur in the breast-fed infant from excess of lactose in the mother's

milk. In the bottle-fed it may be due to condensed milk, excess of sugar in the milk, or to barley-water. At all ages it may be due to diabetes mellitus or chronic interstitial nephritis.

True diabetes insipidus is rare, but it may occur even in infancy. There is generally a history of heredity or a neurotic inheritance. Several members of a family may be affected. Males are more liable than females. A few cases have followed falls on the head, fright, and specific fevers. The affection gives rise to headache, malnutrition and neurasthenia. The pathology is uncertain. Possibly the diuresis depends on some nervous peculiarity in the floor of the fourth ventricle. A recent theory has been advanced that it depends on some fault in the mechanism of urinary concentration, and that, if the solids in the food are increased, the solids in the urine and the amount of urine will also be increased. In other words, the urinary concentration should remain uniform. This case affords no confirmation of the theory. The percentage of urea has varied from 0·5 to 0·9, and was highest on the day on which the greatest amount of urine was passed. I have been unable to trace any connection between the polyuria and the percentage of salt or of purin bodies in the diet. The prognosis is doubtful. Probably the condition will prove permanent. I should take a more hopeful view if there were a definite exciting cause. Some cases recover spontaneously. The affection is little improved by drugs. Opium is recommended, but I am loath to use it unless all else fails.

(*Exhibited January the 18th,* 1907.)

Discussion.

Dr. G. A. Sutherland said it was not a very common class of case, but was one which definitely resisted treatment. From the cases he had seen he believed most of the children were of a nervous type, and did not present any evidence of organic disease. They were very thin, spare, and highly strung, and one sometimes found other symptoms added to the diabetes insipidus, and those symptoms one must look upon as disordered function. A case

he had at present under his care was seven years of age, and was of the same kind as Dr. Cautley's. Some 180 oz. of urine were passed *per diem*. He reduced the fluid taken to 1 pint a day and the child was comfortable. For some days it went on passing considerably more than a pint of urine daily, but it gradually fell, until it became normal. When the child was at home it would pass large quantities at night, and if there was nothing else at hand to drink it would proceed to drink its own urine. That suggested to his mind that the whole condition was one of functional nervous disturbance. He did not know of any drug treatment which did good for the condition. He thought it was important to give a fattening diet, with massage and supervision, and try to stop the habit. He did not say he had worked any permanent cures, because the cases were so chronic that they passed from observation, but one could improve the physique of the child very much. He did not think there was any definite disease.

Dr. F. Parkes Weber said that in the report of the case he did not hear any remark on the secretion of salt in the patient's urine. One of the modern theories of diabetes insipidus was concerned with the power of the kidneys to excrete salt. It seemed that patients with pure diabetes insipidus had the peculiarity of not being able to excrete salt by the kidneys in the way ordinary people could, so that the proportion of salt in the urine of such people was always small, and the excretion of a large quantity of urine was absolutely necessary to carry off the normal amount of salt. If patients with diabetes insipidus took much salt, their polyuria was therefore much increased. It was too early to say to what extent that was a true explanation of diabetes insipidus; even if it were true, it did not explain the nervous origin of the condition in some cases. If it were true, obviously the right thing was to give children with diabetes insipidus the minimum amount of salt and proteid food consistent with health. The fact that in some cases the specific gravity of the urine did not go up in spite of diminution of the polyuria under treatment was quite in accordance with the theory. He referred in his remarks chiefly to common salt.*

Dr. L. A. Clutterbuck said that last summer he had under care a case of a boy, aged 12 years, with a similar condition.

* Phosphate of sodium given by the mouth and secreted by the kidneys does not increase the amount of urine in patients with diabetes insipidus (or in normal persons), but, nevertheless, as the specific gravity of the urine in true diabetes insipidus can practically not be raised it is clear that even sodium phosphate must occupy some of the limited room when it is secreted in the urine, and thus must cause a temporary retention of common salt, which has afterwards to be compensated by increase of the polyuria. On the whole subject see Erich Meyer's article in the 'Deutsche Archiv für klinische Medicin,' 1905, vol. lxxxiii, pp. 1–70.

When he first saw him he was passing six pints a day, but, chiefly under iron and ergot, the amount of urine came down to three pints a day. He made the boy pass his urine before him (Dr. Clutterbuck), and the specific gravity was only just appreciably over 1000; it did not reach to the first division of the urinometer. When the urine got down to three pints, although it was again passed before him, he did not notice any difference in the specific gravity. He was passing ·5 per cent. of urea; the salts were not estimated.

Dr. C. O. Hawthorne said he was not able to speak of diabetes insipidus in the mild tone adopted by Dr. Sutherland. His own experience was that it was a very definite disease, even though nothing was known about its organic interpretation. He would be in a difficulty in attemping to explain away some of the cases he had seen as mere functional disturbances. He was not familiar with the theory which Dr. Parkes Weber had related, but he was surprised to hear the amount of urea spoken of as small. He recalled one case in which the amount of urea excreted in the day was enormous. He wondered whether, in the present case, the administration of antipyrine had been tried. It might be a mere coincidence, but he had seen one case in which this drug appeared to have considerable value, especially in causing diminution of the quantity of the urine, and consequently in the urgency of the thirst.

38. A CASE OF PREMATURE DEVELOPMENT.

By F. J. POYNTON, M.D.

D. W—, aged $2\frac{7}{12}$ths years; only child. At birth an ordinary infant. Commenced to grow remarkably at one year. Pubic hairs and sexual development then noted. Except for a "feverish cold" has had good health.

Weighs 3 st. 1 lb. Circumference of head 20 in., thorax $22\frac{1}{2}$ in., abdomen 23 in., length of arm and forearm 12 in., length of leg 17 in.

Voice deep, memory good, aspect suggestive of acromegaly. No supra-renal tumour to be felt. Parents small but healthy.

(*Exhibited January the 18th*, 1907.)

39. A CASE OF FRIEDREICH'S DISEASE.

By F. J. POYNTON, M.D.

D. F—, aged 9 years. Five years ago measles. Ill with severe cerebral symptoms at the time. In bed six weeks. Noted to be staggering when she got up. Never well since, but has been very much better until the last six months.

Well-marked ataxy, inco-ordination of hands, tremor, doubtful nystagmus; knee-jerks abolished. Back, lordosis of upper dorsal spine. Plantar reflexes; left flexor, right ? extensor. Tendency to get double pes cavus.

Speech a little slow. No sensory changes. No sphincter changes. Mental state good, but highly nervous. No optic neuritis. One sister has doubtful nystagmus, and the father has been treated for neurasthenia with vertiginous attacks.

Dr. Poynton said he was not quite sure of the diagnosis, but that was his view, the alternative being a cerebellar encephalitis. (*Exhibited January the 18th*, 1907.)

Discussion.

Dr. C. O. Hawthorne said he was disposed to agree with the diagnosis of Friedreich's disease.

40. ŒDEMA IN AN INFANT.

By GEORGE CARPENTER, M.D.

Rosina R—, aged 14 months, a small baby born, was admitted into hospital under Dr. George Carpenter on January the 14th, 1907. Diarrhœa set in just before Christmas; that improved, but she subsequently developed swelling of her feet, hands, and eyes, for which she was brought for advice. Breast fed, with recent addition of bread and butter. Urine passed well, and bowels natural. A history of consumption.

On admission œdema and pitting of the feet, legs, hands, and arms, the abdomen and flanks, together with puffy eyelids, simulating renal disease. In the sacrum and buttocks and the flexor aspects of the thighs and legs there is a desquamating dermatitis. Owing to the bowels being moved frequently it was difficult to collect specimens of urine, but when obtained neither albumin nor sugar were found; chloride 0·06 per cent. (Mohr's test). A few râles at the base of the right lung. Very rapid pulse. Weight 7 lbs. Temperature subnormal.

Postscript.—Subsequently during her stay in hospital the temperature usually kept subnormal. On January the 31st the chloride estimate was 5 mg. per 10 cm. of urine, and at no time was any albuminuria present. The dropsy began to leave the face on January the 22nd, and during the next ten days gradually disappeared from the abdomen and limbs, and, last of all, from the ankles on February the 2nd. She left the hospital well on the 19th. (*Exhibited January the 18th,* 1907.)

41. A CASE OF WEBBED PENIS.

By P. LOCKHART MUMMERY, B.C.

The penis was enclosed within the skin of the scrotum right up to the tip. There was no other abnormality and no history of similar defects in the family.

(*Exhibited January the 18th,* 1907.)

42. CASE OF ? CONGENITAL CEREBELLAR ATAXY.

By G. A. SUTHERLAND, M.D.

A boy, aged 3 years, who had suffered from general ataxy for eighteen months, was shown. He was healthy

at birth, but at the age of six months suffered from convulsions. When first seen at the age of two years he was unable to sit up or stand without support; his limbs generally were tremulous and ataxic; and his speech and intelligence were very backward. Sensation was normal, the knee-jerks were very active, and the optic discs were pale, but not definitely atrophic. There was internal concomitant squint of both eyes. At the end of nine months the condition remained much the same, except that the child could sit unsupported, and knew a few more words. In commenting on the case Dr. Sutherland pointed out the marked ataxy which was present and suggestive of cerebellar disease. At the same time the mental deficiency and the squint suggested a more general cerebral lesion. He thought it probable that the case was one of birth palsy following meningeal hæmorrhage, and possibly involving the cerebellum.

(*Exhibited January the* 18*th,* 1907.)

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43. A CASE OF CONGENITAL DEFORMITIES OF THE SO-CALLED MONGOLIAN TYPE OF AMENTIA.

By G. A. SUTHERLAND, M.D.

A GIRL, aged 8 years, with the shortening and curving of the little fingers, and the oblique palpebral fissure, which are so characteristic of the Mongolian type of imbecility, was shown. The patient, however, was perfectly intelligent, and had none of the cranial or other deformities of Mongolian imbeciles. She was under treatment for chronic fibroid phthisis.

(*Exhibited January the* 18*th,* 1907.)

44. A CASE OF CRETINISM.

By E. I. SPRIGGS, M.D.

AND

F. W. HIGGS, M.B.

This child, a female, aged 2 years and 7 months, was brought to the Victoria Hospital by her parents with the complaint that she had always been backward and was not getting on at all. The family is a healthy one.

The child is 26 inches long, and the circumference of the head is 17¼th inches; her size is, therefore, that of a girl of about ten months. She cannot walk, or even stand up without assistance. The aspect of the face was characteristic on admission, the eyes wide apart, the base of the nose broad and sunken, the mouth large and open, with thick lips, the skin dry, the subcutaneous tissue thickened, and the cheeks hanging. The complexion has already improved markedly in the three weeks since the administration of thyroid extract was begun. The hair is straight and scanty, being almost absent on the sides of the cranium, and of a yellow colour. The fontanelle is open. The neck is thick, and thrown into folds, and the thyroid body cannot be felt. There are no fatty tumours. The hands are broad and covered with loose inelastic skin. The feet are cold and the body temperature rarely rises above 97° F. The abdomen is loose and protuberant. There are no signs of rickets, and the voice is not hoarse. Six teeth are present.

The mind of the child appears to be that of a baby about 8 months old. She is not torpid, but looks about her, and laughs if any effort is made to amuse her; but she has made no attempt to speak, cannot grasp objects with her hands accurately, constantly makes a loud clicking noise with her tongue, and passes all discharges into the bed. Thyroid extract has been given for three weeks, one grain being now taken three times

a day. The improvement in her general condition in this time is remarkable, as is shown by a photograph taken at the commencement of treatment. The extract has caused her weight to fall by half a pound, and this loss was accompanied by considerable restlessness and fretting. A reduction of the dose at once ameliorated these symptoms.

(*Exhibited February the 15th*, 1907.)

Discussion.

The Chairman (**Mr. Sydney Stephenson**) said the case exemplified one of the miracles of modern therapeutics. There was much information available in the Society on the subject of cretinism, many of the members having done original work in connection with that question; and he hoped they would discuss the case.

Dr. Leonard Guthrie said the case was a typical example of cretinism, and the exhibitors were to be congratulated on the excellent results of treatment. He noticed it was said that, although the child was getting on, the dose was increased to 2 gr., three times a day. As a rule, a child which was going to improve did not require such a large dose. He would like to hear opinions as to why some cases of cretinism improved under thyroid while others did not, but, on the contrary, were made worse by the drug, perhaps developing diarrhœa, and possibly dying in one of the attacks. It used to be thought by most physicians that when the diagnosis of cretinism was made the course was perfectly simple; that if one put the child on thyroid, the myxœdematous symptoms would disappear and remain absent during the administration of the drug. He had always thought that a child who was breast-fed escaped myxœdematous symptoms, because there was something in the milk of the mother which possibly took the part of the thyroid secretion. But recently he had two children who showed the opposite state of matters. Both were full-blown typical cases, yet both had been breast-fed entirely. He put the elder one, aged 14 months, on thyroid treatment, but without any abatement of the symptoms; it had collapse, diarrhœa, and eventually it died. Post-mortem, there was no trace of thyroid to be found. The second case, aged 5 months, he was also dissatisfied with, though at first it improved under half-grain doses of thyroid. He had to choose between seeing the child waste and die from diarrhœa and leaving off the thyroid. He would like to hear whether others had noticed that some children became myxœdematous while at the breast, and were not amenable to thyroid treatment.

Dr. Fletcher Beach said that a good deal depended on the age at which the thyroid treatment commenced. Two of his cases were: a boy, aged 19 years, who did not improve at all under thyroid treatment; his sister, aged 6 years, who had been under the thyroid treatment, came to see him the other day, and she had grown about six inches in a very short time. He had not met with diarrhœa in such cases, as referred to by Dr. Guthrie. Fortunately, all his cases had been able to take the thyroid, and they had all, with the exception of the case just mentioned, improved. The cases should be brought under treatment as soon as possible, then more advantage would be got out of the administration than otherwise. He had seen mental improvement as well as physical under the thyroid treatment, but it was necessary that a patient should undergo the treatment during the whole of his life; if he or she discontinued it the patient would relapse into his former condition.

Dr. F. J. Poynton said he had under treatment the child of a woman who had had exophthalmic goitre. Her first child was a cretin whom she nursed. He thought it was an exceedingly interesting point in the history of cretinism that the mother should have had exophthalmic goitre, and that her first and only child should have been born a cretin. In that case the child reacted to the thyroid splendidly, and one could not now recognise that it was a cretin. He had also one girl who had originally been treated by Dr. Garrod. She had been under treatment nine years, and he had thought he would try the effect of gradually leaving the thyroid off. On doing so a thyroid swelling appeared in the neck, and when the drug was resumed that swelling disappeared. That happened several times. There was not then a complete absence of the thyroid in that case, and the result bore on the treatment of certain goitrous swellings in the neck, which appeared about puberty, and were cured by thyroid treatment. If children born as cretins were carefully treated up to puberty, he would like to know whether it was ever possible to leave off the thyroid treatment, because if there were any thyroid gland present at all it might possibly develop at puberty. He believed it was true that when sailors went away their wives sometimes got swellings of the thyroid gland and these swellings disappeared when the sailors returned, showing some connection between the thyroid and the sexual functions. It seemed possible, then, that in some cases of partial cretinism the advent of puberty might cure the condition.

Dr. G. E. Shuttleworth (Sheen) said he had not had the opportunity of seeing many such cases after puberty, but in some of the cases which came under his notice, while inspecting children in defective schools, attempts had been made to leave off the thyroid treatment, but he could not recall one case in which

the teachers, at all events, had not noticed a marked diminution of intelligence as a result of that proceeding. He believed that the constant administration of thyroid would cause a development of the mental faculties even at a later age than that at which such development was, in normal cases, supposed to have ceased. Of course, all would recognise, with Dr. Beach, the necessity of treating such cases early; but, on the other hand, he was called upon to treat a case, forty years of age, with thyroid, and although the patient did not grow physically, the increase of intelligence observed was very remarkable.

Dr. Robert Hutchison said he had seen the case, and though it was not now typical, there was no doubt that it was a cretin. An interesting point was the extent to which mental improvement was brought about by the administration of thyroid. Everyone seemed to admit the physical improvement, but he was doubtful about the mental benefit. He remembered a case which had been treated at St. Thomas's Hospital; he was then aged 15 years, and the treatment had been commenced when thyroid extract first began to be given. At that age he was, for all practical purposes, a normal boy. He had never had as good a result as that, though in some he had started the treatment in the first three months of life. The majority of his cases grew up more or less imbecile, although there was no trace of cretinism left in regard to the physical signs.

Dr. Porter Parkinson said he had had one case of cretinism under care for about seven years, the treatment having been commenced at the age of five. Physically, one would not be able to recognise the condition in the least. It was at one time in a special school, but otherwise had been attending the ordinary school. Though now twelve years of age, it remained in the infants' school until eighteen months ago. The child was now in the first standard, where the average was seven years. Its capacity for reading and writing did not extend beyond a few words.

Dr. G. A. Sutherland said an interesting point about the case was the dosage which was given, which seemed to have been successful. In the early days of treatment by thyroid he was unfortunate in losing a number of cases under treatment owing to the onset of acute intractable diarrhœa from overdosage. As a result he began with very much smaller doses than the present child had had, and he would have expected severe diarrhœa in this case. There appeared to have been diarrhœa for a couple of days, and then the dose was reduced. One of the Edinburgh physicians had been treating all his cases of marasmus with thyroid, and he recorded that the treatment had to be stopped owing to the onset of diarrhœa. He gave half a grain three times a day, which he, Dr. Sutherland, regarded as too large for children of three months.

Dr. E. I. Spriggs, in reply, said he did not know for certain whether the child was breast-fed; his own experience did not enable him to add anything to what had been said as to breast-fed children developing cretinism. He agreed that small doses of thyroid were sufficient. In this case the resident medical officer had increased the dose without his knowledge, but, it must be admitted, with conspicuous success, for the improvement which had occurred in three weeks was astounding, considering the slow rate at which such cases generally improved. The child was now taking 1 gr. three times a day. At one time it was having 2 gr. three times a day, but as there was diarrhœa the dose was reduced, and the diarrhœa stopped. He had seen serious collapse, with diarrhœa from thyroid extract, twice in myxœdematous women, one of whom was only taking $2\frac{1}{2}$ gr. twice a day. From his own experience in myxœdema he was sure there was no rule as to the amount which an individual could safely take.

45 A CASE OF CEREBRAL TUMOUR.

By EDMUND CAUTLEY, M.D.

Thomas D—, aged 10 years, was admitted under my charge at the Metropolitan Hospital on January the 9th, 1907.

He is the only child of healthy parents. The mother had one miscarriage two years after his birth. He has had no previous illness and no discharge from the ears.

For six weeks he has had attacks of headache, waking him up at night. The attacks lasted for about twelve hours, terminated in vomiting, and occurred about once a week. A squint has been noted for two weeks. He was brought to the hospital on January the 8th. The previous day he had seemed quite well, went to school and played football. He was brought for the squint. There had been no headache or vomiting for a week.

On examination he was found to be apparently a normal, healthy boy, except for paralysis of the left external rectus muscle and double optic neuritis. The pupils were equal, medium, and reacted well. The knee-jerks were exaggerated.

He was kept in hospital for a month and developed no further symptoms. He remained free from headache, was cheerful, intelligent, and took food well.

The condition is apparently unaltered. Vision is little, if at all, impaired, although there is well-marked optic neuritis, about 1 mm. of swelling. Both the diagnosis and prognosis are somewhat uncertain.

On account of the association of the optic neuritis and paralysis of the left sixth nerve, I take the view that the boy has got a cerebral tumour pressing on the sixth nerve in its course. Probably it is in the superficial portion of the pons, small, tuberculous, and quiescent. The complete abeyance of symptoms indicates that the growth is not increasing.

The fact that there is no headache, although there is optic neuritis, raises the question whether or no the neuritis is due to increased intra-cranial pressure. Such neuritis is generally supposed to indicate increased intra-cranial pressure, and is of no value for the purposes of localisation. A unilateral neuritis is usually due to an affection of the orbit.

Cerebral tumours are more common in boys than in girls, possibly because they are more liable to injury, sometimes regarded as an exciting cause. About 50 per cent. of such tumours are tuberculous. Next in frequency come the sarcomata and gliomata, while all other varieties are extremely rare.

Even supposing that the tumour is quiescent, or regressive, I should like to hear the opinion of the members of the Society on the probable course of the optic neuritis. Will it terminate in optic atrophy and blindness?

(*Exhibited February the* 15*th*, 1907.)

Discussion.

Dr. C. O. Hawthorne said the case belonged to a not very uncommon class in which there was only slight evidence, beyond optic neuritis, of gross intra-cranial disease. In some the optic neuritis was, as here, associated with an ocular paralysis, in some with disturbance of the knee-jerks, and in others, again,

with paralysis outside the area of distribution of the oculo-motor nerve. In such a case it was difficult to feel quite sure that one was dealing with an intra-cranial tumour. He believed the present case was one of tumour, though he admitted that double optic neuritis and ocular paralysis might exist from causes other than gross intra-cranial disease. He had seen and recorded cases in which such a combination of symptoms was present in patients suffering from chlorosis and followed by complete recovery. But such symptoms suggested in the strongest possible manner a diagnosis of gross intra-cranial disease, unless some other explanation could be confidently afforded. The next question was the prospect in these cases. A number of children with these symptoms certainly recover except for post-neuritic optic atrophy. He believed the explanation was the existence of intra-cranial tumour, which after a period of activity passed into a state of quiescence. In a certain number of cases it had been demonstrated that a tumour might long exist in the brain without active symptoms. There was one case of a patient who, for thirty years, was an inmate of a blind asylum, the blindness having followed a severe illness which occurred when he was twelve or thirteen. He died of malignant disease of the stomach, and in the cerebellum there was what the pathologist pronounced to be a withered, myxomatous tumour. That was about as complete a demonstration as one could have that tumours which were active in early life might become quiescent, and the patient might, except for the blindness, lead an active and healthy life. Is it possible for patients such as Dr. Cautley's to recover without optic atrophy? That was a difficult question to answer; all one can say is that patients with double optic neuritis of more or less uncertain causation undoubtedly do sometimes make a good recovery. In the present case should one recommend that the skull be trephined so as to attempt to diminish the optic neuritis and save the sight? Experience seemed to show that such an operation was justifiable, and in the hands of expert surgeons good results had, no doubt, followed. He had advised operation in some cases, but his experience had not been encouraging. He recommended that the boy should be put to bed, and given mercurial inunction, and possibly later the question of trephining might be considered. He did not know whether lumbar puncture had been performed for diagnosis. He had never found it, even though repeated, of any value in such cases as a form of treatment.

The Chairman (Mr. Sydney Stephenson) said that everyone was familiar with the class of case which Dr. Hawthorne had mentioned, in which adults were blind through optic atrophy due to an intra-ocular growth which had become quiescent. It was a very reasonable surmise. With regard to trephining, if

the sole object of trephining was to save the sight, the same end might be attained by opening the sheath of the optic nerve, as, from a surgical point of view, that was a less severe procedure. And there was much evidence to show that if one could evacuate fluid, one could, in many cases, restore sight. But that was merely the treatment of a symptom.

Mr. Lockhart Mummery said Harvey Cushing has shown that one could tell what was the intra-cranial pressure by taking a sphygmographic reading of the blood-pressure. In those cases in which the intra-cranial pressure was raised, the blood-pressure was found to be also raised to about 2 mm. of mercury more than the intra-cranial pressure. The obvious reason was that if the intra-cranial pressure were to become higher than the blood-pressure the individual must die from anæmia of the brain. The question of operation for the removal of the tumour did not occur in this case, because localisation of such a tumour could scarcely be exact enough for one to make certain one was coming down upon it. And even if a tumour were found, it would probably be out of the question to attempt its removal. So that if an operation was performed it would be with the object of diminishing the intra-cranial tension, and he thought that would be the correct treatment if the tension was high. A blood-pressure chart should be kept of the case to act as a guide to the intra-cranial pressure. If the blood-pressure was high or increasing trephining would be indicated.

Dr. E. I. Spriggs said it was true the intra-cranial pressure, as taken by the manometer screwed into the opening in the skull, corresponded to the blood-pressure, and depended upon it, but the physiologically accurate term "intra-cranial pressure" evidently did not mean the same thing as caused the symptoms attributed by neurologists to increased intra-cranial pressure. Optic neuritis, for example, was not caused by the clinical condition of high blood-pressure.

Dr. F. Parkes Weber said there seemed to be no doubt about the existence of cases of intra-cranial disease in which all the symptoms of cerebral tumour occurred, but in which the result failed to confirm the diagnosis; one had in such cases to admit that either there was a tumour, which had retrogressed or become quiescent, or else that the diagnosis was wrong and some other condition had given rise to the symptoms. It was terrible that some of those cases when they recovered from the headache and other symptoms should be left permanently blind. So far as he gathered from Sir Victor Horsley's address* before the British Medical Association, at the last annual meeting, the blindness would not have occurred if the cases had been trephined and a sufficiently free opening made in the skull and dura mater at the commencement, when the first signs of

* 'Brit. Med. Journ.,' August the 25th, 1906, pp. 411–423.

optic neuritis appeared. He had himself had no experience on that point. Sir Victor Horsley, in his address, spoke of de Wecker's old process of incising the sheath of the optic nerve in the orbit as being of no avail, but maintained that in intra-cranial disease blindness could be averted by early opening of the sub-dural space.

Dr. Edmund Cautley, in reply, said he had been much interested in the views which had been expressed about intra-cranial pressure. There was no proof that increased intra-cranial pressure was present in his case, any more than there was reliable proof that optic neuritis was always due to increase of pressure within the skull. The boy had attacks of headache and vomiting at the onset, but they only occurred once a week, and the vomiting followed the headache. He had these attacks for only six weeks, and while he had been under observation he had had neither headache nor vomiting, both of which one would have expected to continue if the intra-cranial pressure had been increased. One would have expected the optic neuritis to have been progressive, but it had been stationary. He agreed with Dr. Hawthorne's views, and mentioned that the boy had exaggerated reflexes, especially the knee-jerks. He thought there was a cerebral tumour, and that it was tuberculous. There was no other evidence of tubercle, nor of any exciting cause, such as injury. The tumour was probably in the superficial part of the pons, pressing on the sixth nerve. It was quiescent, and possibly retrogressing. He held a favourable view of the prognosis, and would be pleased to show the boy again later. He was doubtful about the prognosis of the optic neuritis.

46. A CASE OF CEREBRAL ABSCESS AFTER OPERATION.

By PHILIP TURNER, M.S.

Lily L—, aged 7 years, was admitted into the Belgrave Hospital on December the 3rd, 1906, for a painful swelling behind the right ear. Two days before admission she had pain in the right ear followed by pain and swelling over the mastoid process, and on the day of admission she had an attack of shivering. The temperature on admission was 101° F. In 1903 the child had measles, and during the past year she has had occasional "fits." In these attacks she becomes unconscious for a few seconds

and may fall down, or if she is holding any article in her hand will drop it. The mother's attention seems to have been directed to these attacks by the patient breaking things occasionally. No convulsions have ever been noticed. The patient is one of eleven children of whom three have died, one of bronchitis, one of enteritis, and the cause of death of the third could not be ascertained. The remaining seven are healthy.

On December the 4th the mastoid antrum was opened and was found to contain pus. In the course of the operation the dura mater was exposed in the posterior fossa, and owing to the thinness of the roof of the antrum in the middle fossa as well. There was no pus in the extra-dural space, and the dura was not bulging and appeared quite normal. The antrum and tympanum were thoroughly syringed out with saline solution.

The temperature then came down to normal, and for five days the patient did well, but the temperature then rose to 101° F., and she became slightly drowsy. At 5 a.m. on December the 10th, she had a convulsion. Movements commenced in the left side of the face and the left hand and then spread and became general. At 6.30 a.m. she was semi-conscious and there was paresis of the left arm and leg. An anæsthetic was given and the dura mater freely exposed, but it was not tense and no pus was found. A quantity of granulation tissue obstructing the passage between the antrum and the tympanum was, however, removed, and a free communication made between these cavities. Dr. Buzzard saw the child next morning, and found that though there was still slight paresis of the left side there was no optic neuritis. He agreed that, as the patient had improved, the cavity could be freely syringed, and in view of the history of *petit mal*, no exploration of the brain for pus should be made unless some further sign should develop.

For the next week the child did well, but on December the 17th she complained of headache and the next day became slightly drowsy. There was no vomiting, the

temperature remained about normal and the pulse-rate varied between 80 and 90 to the minute. The drowsiness, however, increased, and on December the 21st an anæsthetic was given. More bone was removed above the ear, and the dura mater in the middle fossa was now found to be very tense when compared with that in the posterior fossa.

The temporo-sphenoidal lobe was accordingly explored with a large needle and pus was found one inch above the external auditory meatus. The dura mater was accordingly incised when a little serous fluid was noticed in the sub-dural space. The abscess was opened by dressing forceps and about ʒiss of greenish pus escaped, a large tube being used for drainage.

When the child came round from the anæsthetic the drowsiness had disappeared, and except for a hernia cerebri, which soon disappeared, and a few transient rises in temperature, convalescence was uneventful and the wound has now quite healed.

At the present time the mental condition of the child is remarkable. She is very mischievous, her habits are dirty, she very often gets into furious tempers and is then quite unmanageable. She also uses very bad language. The attacks of *petit mal* have also greatly increased in frequency, several being noticed in the ward every day.

The chief points of interest in the case are: (1) the occurrence of middle-ear disease with cerebral abscess in a child subject to *petit mal*, and the difficulty this caused in the diagnosis of the abscess. (2) The mental condition and the increase in the attacks of *petit mal* after the operation. (*Exhibited February the 15th*, 1907.)

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47. LYMPHATIC NÆVUS OF THE TONGUE.

By P. LOCKHART MUMMERY, B.C.

The tumour was discovered accidentally in the course of an examination for some digestive disturbance. The

mother had never noticed the tumour, nor had it ever caused the child any inconvenience. The tumour is about 1½ inches long, and ⅝ths inch across. The surface shows small, clear-walled cysts, and it is almost certainly a lymphatic nævus. It is not proposed to perform any operation for its removal at present.

(*Exhibited February the 15th*, 1907.)

48. TEMPORARY DISAPPEARANCE OF A DIASTOLIC AORTIC MURMUR; ? ADHERENT PERICARDIUM.

By EDMUND CAUTLEY, M.D.

This boy is interesting from a diagnostic point of view. He is eight years old, and was admitted into the Metropolitan Hospital on November the 10th, 1906, for rheumatism of five days' duration. On the following day he developed pericarditis and had a severe attack, with effusion, being most gravely ill. The fever subsided on the fourteenth day of his illness. Ten days later he became again feverish, and continued so for another ten days. Corresponding with this second attack of fever there was no fresh pericarditis, but there was evidence of myocarditis and endocarditis. A soft diastolic aortic and a mitral regurgitant murmur could be heard. The mitral murmur soon disappeared and has remained absent. The aortic murmur varied considerably. After increasing in intensity for four days and becoming musical, it rapidly disappeared, and was replaced in three days by a ringing aortic second sound. After four days it returned, and the pulse was sudden. The murmur became louder, more musical, whistling in character and widely distributed. A thrill was also felt. Then it lost its musical character and again rapidly disappeared, being no longer heard twenty-six days after it was first noted. At this time the physical signs indicated almost complete recovery. No murmur could be heard, and there was little cardiac hypertrophy.

The boy then had an attack of mumps, and the heart again dilated a little. A few days ago the murmur was once more heard, quite soft in character. To-day the murmur is much more obvious, probably as the result of excitement.

The disappearance of the murmur created in my mind the hope that it was due originally to dilatation of the aortic orifice, leading to incompetence of the valves, and a narrow slit-like chink between two of them. I fear now that one must not take such a favourable view, and that there has really been endocarditis of the valves, resulting in permanent damage.

It is doubtful whether there is any adhesion of the pericardium. The cardiac hypertrophy does not appear to be more than would be produced by the aortic regurgitation. On the other hand, it seems likely that some adhesion must have taken place after such a severe attack of pericarditis.

(*Exhibited February the* 15*th,* 1907.)

Discussion.

Dr. Alexander Morison said the only murmur he detected was an aortic diastolic murmur, of very limited distribution, which probably was the stage in which it had been for many days. One was chary of diagnosing adherent pericardium without definite evidence, which evidence he did not think existed in the present case. Even when evidence had been regarded as positive, post-mortem examination had shown that the signs had been unreliable. In the present case he did not detect anything beyond an aortic diastolic bruit. The disappearance of the bruit was interesting; one knew valves did recover in that way, and in this case there had been absorption of fresh material, which had restored the valve practically to its normal condition.

Dr. G. A. Sutherland asked whether Dr. Cautley had any special reason for pressing the question of adherent pericardium? Also if the Society diagnosed that it was present, did he propose operative treatment?

Dr. Morison, in further comment, said he felt strongly on the question of operative treatment in such cases. Many a valuable life had been sacrificed by the timidity of physicians under such circumstances. He hoped, in the not distant future, to somewhat redeem that by operating on the first suitable case.

Dr. Edmund Cautley, in reply, said it was difficult to decide whether the patient had an adherent pericardium. There was not very extensive hypertrophy, not more than the aortic regurgitation would account for, and yet the boy had had a very severe attack of pericarditis, with effusion, a condition which would be expected to be followed by adherent pericardium. Like Dr. Morison he was looking for a suitable case for operation. The last case under his care died without operation. He regarded a very frequent, small pulse as indicative of extensive adhesion, but this boy's pulse was not more than 80, not unduly frequent for a child of his age who had passed through such an illness. The disappearance of the murmur was striking in that it was very gradual, and he was at first inclined to attribute the murmur entirely to the fact that the heart was dilated as the result of myocarditis, and that the aortic orifice was also dilated. As a result of the dilatation a chink was left between the aortic valves large enough to cause a whistling murmur, and as the parts got smaller that chink was closed up. He thought now that there had been some partial destruction of the valve in addition.

49. A CASE OF INFANTILISM.

By L. A. CLUTTERBUCK, M.D.

Florence F—, aged $13\frac{9}{12}$ths years, the first child of a large family, all the others being normal; born when her mother was twenty-two and her father twenty-one. Parents not related; no specific history. Was breast-fed up to seven months old.

At three months had hæmorrhage from the bowel, with great abdominal pain, and was very ill for some time. Her mother thinks her growth was retarded from this time.

Between seven and eight had measles and chicken-pox; both slight. Was sent to school at seven, and attended for one year; never got out of the infant's standard. She is slightly deaf.

Was treated at a dispensary from eight to ten with tablets (? thyroid), for two years; there was always a difficulty in getting her to take and retain them.

Mother did not see any particular improvement from the treatment. The child has not the characteristics of a cretin. Though she does not know her letters she is intelligent, and does ordinary household shopping for her mother.

Present condition.—Circumference of head 20 inches; has 22 teeth, 12 on right side, 10 on left; voice is rather deep, lobules of ears adherent. Thyroid gland not obvious; movable lymphatic (?) gland in region of right lateral lobe.

Weight 2 st. $6\frac{3}{4}$ lbs.; height 3 ft. $4\frac{1}{2}$ in.

Mammæ quite undeveloped; no sign of pubic hair.

Her mother thinks she has grown four inches in the last two years.

I am indebted to Dr. Fletcher Beach for permission to show this case.

(*Exhibited February the 15th,* 1907.)

Discussion.

Dr. F. Parkes Weber said it seemed to be a case of simple retarded or imperfect development; there seemed to be none of the generally recognised causes of arrested development present. Though the child was small, it was in its proportions well-formed, and he was hopeful that it would ultimately develop up to the average size, or nearly so. He had no suggestion to make as to treatment, except general hygienic measures.

Dr. Fletcher Beach said that such cases were of rare occurrence in this country, but Dr. Bourneville, of Paris, who had a large *clientèle*, described several cases of the kind. In his annual report he gave diagrams and histories, showing that the child did grow to a certain extent, but not very much. The cases were in an institution under his management, and they were observed for four or five years, during which time they only grew two inches.

Dr. L. A. Clutterbuck, in reply, said the mother considered that the child had grown about four inches in the last two years, judging by a table in the house; there had not been actual measurement. The child's thyroid was not large. He was glad to hear the favourable prognosis, for the sake of the child's mother.

50. A CASE OF "PUNCH"-LIKE INTONATION IN A SYPHILITIC INFANT.

By G. A. SUTHERLAND, M.D.

E. N—, male, aged 3 years. Patient has been blind since birth, and is very backward mentally. He cannot sit up or raise himself, but progresses along the floor either on his back or on his face. He is very small for his age, with soft flabby muscles, and marked rachitic changes in the long bones. The head is rather square-shaped, with widely open fontanelle. There is scarring about the mouth. The child rolls the eyes about and there are marked fundal changes in the shape of post-neuritic atrophy and general atrophy of the choroid about both central areas. The family history supports strongly the diagnosis of syphilis.

He is very bright and lively, always in good humour, and talks a great deal to himself in a language which is unintelligible. The tone of the voice is peculiar, being "Punch"-like, or squeaking, or parrot-like. No abnormal conditions can be detected in the larynx. The peculiar intonation is not one associated characteristically with rickets, syphilis, or any other disease. The exhibitor has seen one other similar case, also in a child of three years. The latter patient had suffered at the age of eight months from basilar meningitis, followed by hydrocephalus. The ventricle was drained by the sub-dural method, and the patient made a good recovery, but is mentally and physically very backward at five years of age. He has entirely lost the "Punch"-like intonation. It is suggested that a cerebral lesion is responsible for the peculiar intonation in these cases.

(*Exhibited February the* 15*th,* 1907.)

51. THREE CASES OF AORTIC REGURGITATION.

By J. PORTER PARKINSON, M.D.

Case 1.—A girl, aged 9 years, had chorea and rheumatism in 1901, and rheumatism in 1906. There was much visible arterial pulsation in the neck. Cardiac impulse, fifth space, just external to nipple line. Much precordial pulsation. At the apex was heard a mitral systolic murmur, and at the base on the left side a diastolic aortic murmur, conducted downwards. The pulse was water-hammer in character.

Case 2.—A girl, aged 14 years. Has had measles, whooping-cough, and growing pains, but no severe rheumatism. She was thin and anæmic, with visible carotid pulsation. Cardiac impulse just outside nipple-line in fifth space; deep cardiac dulness increased to the right and left. There was a double aortic murmur, a presystolic thrill at the apex, and presystolic and systolic mitral murmurs. The pulse was water-hammer, and there was capillary pulsation. The liver was slightly enlarged. It was probable there was no mitral stenosis as the pulse was fairly large.

Case 3.—A girl, aged 12 years, had a rheumatic history. She had a well-marked aortic regurgitant murmur best heard at the second left costal cartilage, but conducted downwards along the sternum. No other murmurs were present. There was evidence of enlargement of the left ventricle, and the pulse was distinctly of the water-hammer character. Symptoms were absent.

(*Exhibited February the* 15*th*, 1907.)

Discussion.

Dr. L. A. Clutterbuck said that recently he saw a girl, aged 16 years, who had chorea when eight years of age, and now a very marked presystolic mumur. There was marked mitral stenosis, and she had a diastolic murmur at the aortic area,

which was diagnosed at the time as aortic regurgitation. The heart was much enlarged, and it might be a simple dilatation of the left ventricle. The apex beat was well outside the nipple line, so it was apparently secondary to mitral stenosis. There was practically no mitral regurgitant murmur at all.

Dr. E. I. Spriggs thought it probable that Case No. 2 had no mitral stenosis. The simulation of the signs of mitral stenosis in aortic regurgitation was sometimes astounding. A short time ago he had a man with definite aortic regurgitation, with a well-marked presystolic thrill, and very loud presystolic bruit, and signs of mitral regurgitation. The signs of mitral stenosis were so prominent that he felt no doubt there was mitral stenosis. The patient died suddenly two days later from rupture of an aneurysm of one of the aortic valves, and post-mortem perforations of the other two valves were found, and the condition had been due to a regurgitant stream impinging upon the aortic cusp of the mitral valve where a patch of endocarditis was present. Those children showed a pulse not regurgitant, and this was frequently the case in the young. The arteries were elastic, and they took a great part of the blood and passed it on. One of the cases showed very well the delay between the ventricular contraction and the pulse; which would be more marked the more elastic the vessel; with a perfectly rigid tube there would be no delay.

Dr. Porter Parkinson, in reply, said he agreed with Dr. Spriggs as to the unlikelihood of there being mitral stenosis; his reason for his remarks was that the pulse was of moderate size; if there were any appreciable mitral stenosis, the pulse would be considerably smaller than it was.

52. HUGE INGUINAL HERNIA IN CONJUNCTION WITH BASAL MENINGITIS.

By EDMUND CAUTLEY, M.D.

This boy was born on the last day of 1906, at full-time. He is the seventh child. The other children are living and healthy. He was breast-fed and healthy until January the 14th, when he had a fit, screaming attacks, and was constipated. From that time up to the 25th, when he was admitted into hospital, he had frequent attacks of rigidity, coming on especially when he was

touched. The bowels acted daily, but the stools were somewhat hard and small.

On admission he was markedly rigid, so that he could be held up when supported only by the occiput and heels. There was some retraction of the head with opisthotonos. Trismus and a slight internal squint were noted. The fontanelle was not tense.

The abdomen was hard. A huge inguinal hernia was present on the left side and a small umbilical hernia. They could be reduced with difficulty, but immediately returned. At the apex of the umbilical hernia was a small inflamed orifice, through which a probe could be passed backwards and downwards for one inch.

The diagnosis at this time rested between tetanus neonatorum and basal meningitis. The former was excluded on account of the duration of the illness for over ten days without a fatal issue, in spite of the severity of the spasm.

For two days the child had to be fed by the nose. After that he took food well. Nothing special was noted about the stools. The course was that of basal meningitis. For the first week there was considerable irregular fever, the temperature twice reaching 105° F. During the last fortnight the temperature has continued irregular but at a much lower level, only occasionally above 100° F. At present the child weighs 8 lbs. 5 oz., takes food well, digests it, and is free from vomiting. There is, however, very considerable rigidity, which interferes with the reduction of the inguinal hernia. This rigidity is apparently persistent. It is less marked than on admission and is not increased spasmodically. The association of opisthotonos and stiff abdominal muscles raises the question as to whether surgical measures should be at present adopted for the cure of the hernia.

(*Exhibited February the 15th,* 1907.)

Discussion.

Mr. Lockhart Mummery thought that the sooner the hernia was replaced into the abdomen the better. He suggested

that extension strappings should be put on the child's legs, and that the legs should be slung up to a crossbar in the same way as in Bryant's method of treating fractures of the femur, so that the child would be practically resting on his shoulders. This should be done several hours a day. If after forty-eight hours of that the hernia had not gone back, he would operate and put it back. If it were left longer gangrene might occur.

Mr. Francis Jaffrey agreed with Mr. Mummery that if it could be put back that ought to be done, but he did not see how it could be got back with slinging, unless that were done for a considerable time. He had had a case in which hernia was present six weeks. It got very much smaller, and operation was carried out later on. In the present case he would wait until the child got over its opisthotonos and cerebro-spinal meningitis.

Dr. Edmund Cautley, in reply, agreed that the surgical treatment was to reduce the hernia and keep it reduced; but he was not in favour of suspending the child in its present condition, seeing that it was recovering from meningitis.

53. A CASE OF INFANTILE GLAUCOMA (BUPHTHALMIA), WITH REMARKS.

By SYDNEY STEPHENSON, C.M.

Hope B—, aged 10 months.

History.—Born in Queen Charlotte's Hospital on April the 24th, 1906, after a normal labour lasting three hours. Presentation, vertex. No instruments used. The baby's corneæ were noticed to be white when the labour-sister was about to instil silver nitrate drops into the eyes, as is the custom at Queen Charlotte's Hospital in every newly-born child for the purpose of preventing ophthalmia neonatorum. The mother had had four previous children, but no miscarriages or still-births.

When the baby was examined by me on the day following birth, the condition was as under:

Corneæ unusually large, very globular, and so opaque that not a vestige of the deeper structures of the eye, as the iris or pupil, could be recognised. The left cornea

was more affected than the right. The intra-ocular tension was high, especially as regards the left eye. No signs of conjunctivitis, and no discharge from the eyes.

The diagnosis of buphthalmia was made, and physostigmine was ordered to be used to the eyes every four hours. In addition to this, mercury with chalk was administered internally.

On May the 5th, 1906, the baby being then eleven days old, the patient was transferred under my care to the North-Eastern Hospital for Children, Hackney Road, N.E. The right cornea had by that time cleared somewhat, so that the pupil and the iris could be recognised through it. Its transverse diameter was about 15 mm., as compared with 10 to 11 mm. in normal eyes. The left cornea was hazier than its fellow, although when examined in certain lights some indications of the iris and pupil could be made out. Its transverse diameter was 15·5 mm. Intra-ocular tension raised, especially in left eye. Although the baby does not notice, yet she resents a light when placed near her eyes. Some indications of syphilis were present, namely, a depressed bridge, snuffles, ulcerations about buttocks, and the so-called "syphilitic wig."

The further progress of the case may be epitomised in a few words. Treatment by physostigmine to the eyes and mercury with chalk internally has been kept up since admission into the hospital. On June the 17th the corneæ had cleared so much that both pupils could be seen distinctly. June the 26th, 1906: right cornea still slightly dull, although deeper parts can be recognised. Left cornea also clearer than it was, but it presents a denser ring towards its periphery. August the 23rd, 1906: under chloroform, a sclerotomy performed upwards on the left eye. The large size of the eyeball rendered the operation anything but easy. On September the 13th a note was made to the effect that the intra-ocular tension of the left eye was considerably lowered, presumably as the result of the sclerotomy. An anterior synechia, the result of the operation, caused some distortion of the pupil

in that eye. November the 28th, 1906: child's general condition good. She notices well, and the ward-nurse is persuaded that she "can see well."

Present state (February the 15th, 1907).—Child looks about her, and is quick to notice things. The eyes are obviously protuberant, and the corneæ bigger and more globular than normal. They are, however, clear. The left cornea is more prominent than the right one. The left pupil is drawn upwards towards the cicatrix resulting from the sclerotomy, as the result of the adhesion noted above. Tension in left eye it still a little *plus*. Baby's general condition satisfactory.

Summary.—The baby is now ten months old, having been born on April the 24th, 1906. The corneæ, quite opaque when first seen on the second day of life, have now cleared. Sclerotomy was performed on the worse eye when she had attained the age of four months. On the whole, the result of the operation has been good, especially in the sense of having reduced the intra-ocular tension.

Remarks.—Buphthalmia, or infantile glaucoma, is not a frequent affection of the eyes. It is either congenital, as in the present case, or manifests itself during the first few years of life. It may affect more than one member of the same family, as in a remarkable series of cases reported by Walter B. Johnson ('Annales of Ophthalmology,' vol. vii, p. 539), where the fourth, fifth, and sixth members of a family of six manifested symptoms of infantile glaucoma. In about two-thirds of the cases both eyes are involved. Several cases have now been reported where it was associated with a condition of plexiform neuroma or lymphangioma of the eyes and neighbouring parts. The increased size of the cornea, characteristic of the cases, has led to the name "megalocornea," sometimes applied to the condition. In certain cases, as the present one, opacity of the cornea forms the most striking feature of the case, and may lead to confusion with interstitial keratitis, ophthalmia neo-

natorum, or to the results of traumatism during birth. In infantile glaucoma the opacity of the cornea tends to come and go, mainly, as it appears, in conformity with variations in the intra-ocular tension. The eyes of babies suffering from infantile glaucoma seldom show any notable signs of inflammation, as redness or lacrymation, although a degree of reflex blepharospasm (photophobia) is usually present. The eyes, as a rule, as might be expected, are myopic. Striking features are, the size of the globes, the globularity and bigness of the corneæ, the deep anterior chamber, the cupping of the optic disc, and, above all, the raised intra-ocular tension. In a word, the symptoms of buphthalmia resemble those of glaucoma in the adult, so that all competent observers are now agreed as to the essential similarity of the two conditions. Complications include subluxation of the crystalline lens, opacities of the lens, and intra-ocular hæmorrhage. The evolution of the disease, in general, is towards blindness. At the same time there are cases in which buphthalmia may be alleviated and sometimes even cured by operation and by treatment. In fact, the prognosis of the disease is by no means so hopeless as is sometimes taught. A few cases of spontaneous cure are on record. Besides the complications mentioned, the progressive enlargement of the eyeball may lead to the production of rents, resembling supplementary pupils, in the iris, as in one of my cases, or to minute clefts in Descemet's membrane, as in another.

As to the ætiology of buphthalmia there is considerable divergence of opinion. Everybody agrees that enlargement of the affected eyeball is the direct result of intra-ocular pressure acting upon parts which are as yet extensile and yielding. It is also admitted that the outstanding pathological feature of these cases is to be found in the existence of adhesions between the periphery of the cornea and of the iris, which impede the exit of fluid from the eye, and thereby led to heightened intra-ocular pressure. The point at issue is with regard to the cause of these anterior synechiæ, for that is what they are.

Horner, in the year 1889, expressed the view that they represented developmental anomalies. This view has been warmly advocated by Mr. E. T. Collins, who has stated that the synechiæ result from "a failure in the separation of the anterior fibro-vascular sheath from the back of the cornea" (Norris and Oliver's 'System of Diseases of the Eye,' 1897, vol. i, p. 424). On the other hand, as I have pointed out elsewhere ('British Journal of Children's Diseases,' 1905), most of the children with buphthalmia that have come under my care have been very obviously the subject of congenital syphilis. This observation, in which I can scarcely be mistaken, has led me to suggest that the synechiæ, so far from being a developmental anomaly, are attributable to an intra-uterine irido-cyclitis of specific origin. As a point in favour of my view, I may say that I have, on several occasions, seen cases yield to prolonged treatment with mercury and chalk. Again, Abadie ('Annales d'oculistique,' June, 1907) has noted peripheral choroido-retinitis in these cases, which in itself is presumptive evidence of syphilis. The histological appearances of buphthalmic eyes are, to my mind, more characteristic of inflammatory than of developmental defects. Thus, the iris is fibrotic, and the ciliary body often shows evidences of past inflammation; the marginal parts of the cornea, in addition to being attenuated, may be infiltrated with cells and permeated with fine vessels. These changes, I admit, might possibly be of secondary production, but I believe the evidence points rather in the direction of their being primary and the essential cause of infantile glaucoma. Reis (v. Graefe's 'Archiv für Ophthalmologie,' lx, heft 1, 1905) and others have attached importance to the fact that in these cases the canal of Schlemm is more or less obstructed, if not actually absent, as a congenital defect. Obliteration of the venous channels, however, could come about as the result of anterior synechiæ, much as is known to supervene in old cases of glaucoma in the adult (Parsons). (*Exhibited February the 15th*, 1907.)

Discussion.

Dr. Edmund Cautley asked whether Mr. Stephenson attached any importance to the "syphilitic wig" as evidence of syphilis.

Mr. Sydney Stephenson, in reply, said his experience would not allow him to attach much importance to it. He attached more importance to the phrase, which was a picturesque way of indicating what was believed to represent something.

54. A CASE OF UNDUE MOBILITY OF THE RIGHT KNEE-JOINT.

By F. J. POYNTON, M.D.

The child, aged 3 years, was brought to hospital for some digestive disturbance, and it was then found that she had remarkable power of lateral movement in the right knee-joint. If she semiflexed the articulation and inverted her foot she could voluntarily move the tibia outward and slightly forward over the femur and then back again into position. This movement was apparently brought about by the popliteus muscle. There was clearly considerable laxness of the lateral and crucial ligaments. The outward movement was accompanied by a clicking sound. When the limb was extended there was no lateral movement, and walking and running were apparently not interfered with at all. The articulations of the wrists and fingers were to a lesser degree more mobile than natural.

(*Exhibited February the 15th,* 1907.)

55. TUBERCULOSIS OF THE TESTIS IN CHILDREN.

By RUSSELL HOWARD, M.S.

The frequency with which tubercular disease of the testis occurs in children has been a matter of some dispute. Hutinel and Deschamps, discussing tubercular epididymo-orchitis, state that it is not much rarer in

infants than in males after puberty, and Mr. Jacobson, commenting on this statement in his work on diseases of male organs of generation, makes the following remark :

"This must be contrary to the experiences of most English surgeons. During the twelve years in which I have been Surgeon to the Hospital for Children and Women only four cases have been admitted under my care, and during the sixteen years in which I have seen out-patients in Guy's Hospital, the proportion has been smaller still."

These statements of Mr. Jacobson must, I think, be accepted as representing the average statistics seen at London hospitals. During two years' out-patient work as Clinical Assistant at the Hospital for Sick Children I did not meet with a single instance of tubercular epididymo-orchitis, although several cases of tubercular disease of the tunica vaginalis, secondary to tuberculosis of the peritoneum, presented themselves for treatment. To carry on Mr. Jacobson's statistics, at the Royal Waterloo Hospital for Children and Women, during the last three and a half years, I have not seen a case of tuberculosis of the epididymis in the out-patient department of that institution. At the London Hospital, as Surgical Registrar, I have had the opportunity of seeing several cases, but the following figures taken from the register of that hospital (by kind permission of the Medical Council) will show the rarity of this form of tubercular disease. During the last ten years, 1896 to 1905 inclusive, 55,912 male patients have been admitted on the surgical side, and of these 158 were diagnosed as suffering from tubercular epididymo-orchitis. Of the 158 cases, 9 were children under twelve and 149 were patients over twelve. Dividing the 55,912 patients into those over and under twelve, there were 44,419 of the former and 11,493 of the latter. This will give the percentage of cases under twelve suffering from tuberculosis of the testis as ·07, whilst in those over twelve it is ·33. I do not think that this represents the full proportion of those that suffer from this manifesta-

tion of tubercle, for the disease might easily be overlooked in the routine examination of patients, but it does represent all those who have had symptoms sufficiently well marked to cause them to come up for treatment, and the slightest swelling or abnormality of these important organs is generally sufficient to bring the patients to hospital. Many cases also have been admitted as epididymo-orchitis, orchitis, and epididymitis, without specifying the cause of the inflammatory process, and doubtless some of those cases were examples of tuberculosis of the testis in which the specific characters of the disease were not sufficiently well marked to make a complete diagnosis. These remarks, however, apply to cases over and under twelve, and probably do not vitiate the conclusion that tuberculosis of the male generative organs is much more common after than before puberty. This conclusion is the one that would be expected, for it is well known that tuberculosis is most apt to occur in parts where growth or physiological function is active, as in the growing ends of bones, and however important the internal secretion of the testis may be during the early years of life, there is no evidence in the histology of the gland of activity, until the age of puberty is reached, and the organ prepares itself for what may be called its active sexual life.

These *à priori* reasons were also borne out by the incidence of tuberculosis after puberty is reached. Of the 140 cases quoted above, not less than 115 cases occurred between the ages of 20 and 40 years, the period of life when the physiological activity of the testis is at its highest. Curling, in his 'Diseases of the Testes,' also states that the disease is rare before puberty.

In contra-distinction from tuberculosis in the adult epididymis, where the disease is usually secondary to diseases of the prostate and vesiculæ seminales (Fuller), the inflammation spreading along the vas to the testis, in children the epididymitis is usually primary, the bacilli being brought by the blood-stream or lymphatics. In

the nine cases collected from the London Hospital records only one is stated to have been associated with disease of the vesicula, and this receptacle was found to be caseous at the autopsy. In those cases which I had the opportunity of examining myself the prostate and vesiculæ presented nothing abnormal, and this agrees with Mr. Jacobson's statement that the cord is seldom, and the vesicula seminalis and prostate very rarely, found attacked.

Dr. George Carpenter, whilst agreeing that the infection is generally through the blood stream, records a case where there was enlargement of the corresponding vesicula and thickening of the vas. In all cases a routine rectal examination should be made, as thickening in the vesicula or prostate may aid in the diagnosis of tuberculosis from the other causes of inflammation of the testes, such as syphilis or one of infectious fevers.

Jullien gives the left testicle as being more frequently affected than the right, and explains this as being due to the fact that after the age of two the left testicle hangs lower than the right, and is, therefore, more exposed to injury.

In my nine cases the disease was on the left in four, on the right in two, and in the other three both testicles were diseased, with the left the more affected, but there is no evidence to support the view of injury being a predisposing cause, for in only one of the nine was there any history of injury, and that occurred on the right side. I would rather attribute the more frequent occurrence on the left to some difference in the blood supply and venous return, merely calling attention to the well-known frequency of varicocele on the left side.

In only two of the cases was there any marked history of tuberculosis in the family: in one both the father and the mother suffered from phthisis, and in the other a brother died of tubercular meningitis and an aunt suffered from tubercular arthritis of the knee-joint. It was not, however, possible to obtain a family history in all cases, so that the percentage of cases with a well-marked history of tuberculosis is doubtless higher than is indicated.

McAdam Eccles, in his 'Jacksonian Essay on the Imperfectly Descended Testis,' mentions tuberculosis as one of the diseases from which an ectopic testis can suffer, but does not describe any case or give any reference to literature, nor can I find any case of tuberculosis in the undescended testis of infants.

Jacobson gives references to two cases, both of which are doubtful, and states that at present no instance of tubercular disease attacking a retained testis can be said to have been verified. This, as has been pointed out by other writers, may be associated with the fact that the majority of undescended testes are atrophic, and, therefore, have no physiological activity.

The average age of the nine cases is three years and two months, the oldest being ten years and the youngest six and a half weeks old. In respect to the last case, the child died from inanition one day after admission to the hospital, the only obvious disease being double tubercular epididymo-orchitis, and the swelling of the testicle was stated to have been present from birth.

Giraldés, quoted by Curling ('Diseases of the Testes,' p. 236), observed a case in a fœtus at full term. A similar case has been reported by Dreschfield.

Dufour quotes a case at eighteen months, and Prostat one at nine months, the disease having been present for four months.

In one of my cases the child was one year and seven months old, and the swelling was stated to have been noticed for sixteen months, so that inflammation of the testis in the youngest infant should always arouse a suspicion of tuberculosis.

The onset of the disease is generally painless and insidious, and the attention of the mother is usually first attracted by the presence of a firm nodule in the testicle, although in some cases the child is not brought for treatment until caseation has taken place, and the attention is drawn to a soft, red place in the scrotum. In two cases pain was the first symptom noticed, but of the other

cases six were painless throughout, and the swelling was only slightly tender.

The length of time that the swelling had been noticed varied from sixteen months to four days, the average being four and a half months.

On examination, if seen in the early stage, the condition is very similar to that found in the adult. The epididymis is hard and inflamed, the globus major being most affected, but the body of the testis is usually also enlarged as the disease is not limited to the epididymis alone, the glandular structure of the testis being also affected.

According to Jullien, the testis is often found affected without the epididymis, but none of the nine cases collected showed this condition. In only two cases was the vas affected, and in one only was the vesicula enlarged. This agrees with the experience of other writers on the subject.

A small hydrocele containing clear, serous fluid was present in three of the cases, causing the scrotal swelling to be partially translucent, but in none of the five cases in which there was an opportunity of examining were there any tubercles on the serous lining of the tunica vaginalis. In two cases under twelve years old admitted into the London Hospital with tuberculosis of the tunica vaginalis the testes were not affected, but Jacobson records two cases of tubercular disease of the testis in which a patent processus vaginalis was studded with miliary tubercles as far up as it was possible to follow it.

Rectal examination, which should never be omitted, is usually negative, as stated above.

In all the cases, except one in which the organ was removed five weeks after the onset of the disease, caseation occurred, and the condition changed from a hard nodule in the epididymis to a soft, fluctuating swelling on the back and lower part of the scrotum, with red and adherent skin. If left alone the abscess bursts, leading to the formation of a sinus usually at the bottom of the scrotum, from which there is a constant, slight discharge

of pus; later, the other organ becomes affected in a similar manner, and the same changes occur.

Hernia of a tubercular testis is certainly not common at the present time, but may occur in neglected cases. Curling, in his 'Diseases of the Testes,' describes two cases of hernia in chronic orchitis in children, which, looked at in the light of modern ideas, were probably examples of tuberculosis.

Diagnosis.—Besides the nine cases of tubercular epididymitis in the years 1896–1905, there were admitted into the London Hospital nine cases of inflammation of the testis in children under twelve due to other causes; of these two were definitely due to traumatism, three were doubtfully due to traumatism and cleared up with a few days' rest, one was associated with chronic nephritis, one was, perhaps, tubercular, and for the other no cause was assigned. All the cases were acute in onset and very painful, thus differentiating them from the chronic inflammation of tubercle, though perhaps some of the doubtful cases were examples of acute tuberculosis, a condition by no means uncommon in the adult. There were no undoubted cases of syphilitic orchitis in a child admitted into the hospital in those ten years, but this is perhaps accounted for by the fact that congenital syphilis is nearly always treated in the Out-patient Department.

It is often difficult or impossible to diagnose congenital syphilitic orchitis from tuberculosis of the testis (George Carpenter), but the following points may be of assistance:

Syphilitic orchitis is most common in the early months of life; it is usually bilateral, although frequently unilateral; the body is chiefly affected in the majority of cases, although gummata may occur in the epididymis. The vesiculæ and prostate are free but the vas may be thickened, and hydrocele is said to occur in a quarter of the cases. The chief points in the differential diagnosis are the presence of other signs of congenital syphilis and the response to treatment.

In those cases in which the body of the testis is chiefly

attacked, it may be difficult to diagnose the disease from sarcoma.

This, according to the London Hospital figures, is rarer than tubercular disease, only three cases being admitted into the hospital in children under twelve during the years 1896–1905.

The diagnosis of sarcoma can usually be made by finding the body of the testicle rapidly increasing in size without pain and without softening. The growth soon spreads up the cord, and involvement of the lumbar glands occurs early; in the three cases mentioned above, two were inoperable from enlargement of the lumbar glands on admission into the hospital, one three weeks, and the other eleven months after the swelling was noticed.

As regards the prognosis of the condition, the statistics of the London Hospital are not very satisfactory owing to the well-known difficulty of following up hospital cases. I have endeavoured to do so in every case, but out of the nine information could only be obtained of five, of whom two died in the hospital, one twenty-four hours after admission from marasmus, and the only lesion discoverable being tubercular epididymo-orchitis, and the other a few hours after removal of the testis. This latter case had also tuberculosis of the vesicula on the same side, of both lungs, and of the peritoneum. Of the three cases traced subsequently one was described as "well, but delicate," one year after removal of the diseased organ; one, after the abscess had been scraped out, was soundly healed eight months after discharge, whilst a third died with a discharging sinus three months after being sent from the hospital.

Complications, or, rather, associated tubercular conditions, were present in three cases: in one there was tubercular adenitis of the neck, and in the other two, tubercular peritonitis was present with tuberculosis of the lungs in one of them. This association of tubercular peritonitis with tubercular disease of the testis has been noticed by writers on the subject (Edmund Owen, Jacobson,

George Carpenter). It must not be confounded with tuberculosis of the tunica vaginalis, which is frequently associated with tubercular disease of the peritoneum, especially if the processus vaginalis is unclosed. So common is the latter connection that all cases of double hydrocele in children should lead to examination of the abdomen for evidence of the tubercular peritonitis.

Treatment.—In considering the treatment of this condition the effect of removal of the testicle on the growth and development of the patient must be borne in mind. That the presence of a testicle is essential to the proper mental, bodily, and sexual development of a boy is beyond doubt, and that one testicle is sufficient for this development seems equally certain. In cases of a single ectopic testis, if the gland be removed no ill-effects seem to follow, in spite of the fact that it is rare for the other gland to increase in size. That no ill-effects follow cannot, I think, be stated definitely, for the development of children is by no means uniform, and, taking a boy of sixteen who has had one testicle removed in infancy, it is impossible to say if he is as well developed mentally and physically as he would have been if he had had normal testicles. However, so slight is this want of development, if there be any, that for practical purposes "no serious inconvenience to the patient is to be feared so far as complete bodily growth is concerned" (McAdam Eccles). If, on the other hand, both testicles are removed, the outlook is entirely different. The child, on reaching the age of puberty, does not develop the male characteristics, the penis remains undeveloped, the pubic hairs do not grow, the voice does not break, and the prostate remains small. Muscular development may be good, but the limbs tend to be rounded and the subcutaneous fat is present in increased amount.

The methods of treatment that can be adopted for tubercular epididymo-orchitis are: (1) General hygienic treatment and increasing the opsonic index of the blood serum; (2) removal of the diseased tissue; (3) orchidectomy.

The first method may be tried if the case is seen early, but the general experience seems to be that caseation and sinus formation is common in spite of good hygiene, and certainly in the nine cases I have collected caseation occurred in every one of them, being present even in the case with only a five weeks' history and, clinically, showing no signs of breaking down. At the present time tuberculosis of the adult epididymis is being treated with some success by the opsonic method, and time will prove or disprove the value of this treatment. It may be tried in an early case in children and if the patient's parents are opposed to more radical methods of dealing with the diseased organ, but I know of no case in which it has been used.

No local treatment is likely to be of any avail and it is useless to strap the testicle.

If the disease progress in spite of this method of treatment, or if the case be first seen at a later stage when softening has already begun, I should advise orchidectomy rather than limited removal of the diseased part for the following reasons :

(*a*) The disease is rarely limited to the epididymis but involves also the body of the testis.

(*b*) The gland is so small that scraping, etc., is likely to destroy it completely, so that the final result is the same as if the testicle were removed, and the risk of recurrence and sinus formation is greater.

(*c*) Removal of the epididymis and, at the same time, saving the branch of the spermatic artery going to the testicle, is exceedingly difficult in the infant.

(*d*) That, as stated above, mental, sexual, and physical development is little, if at all, interfered with.

As has been stated before, the vesiculæ and the prostate are seldom affected ; in these cases, therefore, orchidectomy holds out a fair hope of completely removing the disease, and even if these organs are already diseased orchidectomy should still be done to rid the child of one source of disease so that he can more easily cope with another focus.

In cases complicated by tubercular peritonitis the testis should be removed, as the prognosis of this disease is distinctly good at the present time.

When both glands are affected the question of treatment is more difficult, for, as shown above, the removal of both testes is disastrous to the well-being of the patient. In spite of this, Edmund Owen advises that if, after removal of one testis, the opposite gland be affected, it also should be removed ('Surgical Diseases of Children'). I think that this double orchidectomy should only be done after the most careful treatment of the diseased organ. If one testicle has already been removed and the other becomes affected, general hygiene and opsonic treatment should be tried. If, in spite of this, caseation occurs, the caseous focus should be scraped out with a sharp spoon or a portion of the epididymis resected, opsonic treatment being continued. Repeated scrapings may be necessary, and it is only when the disease steadily

Name.	Side.	Age in years.	Duration.	Other lesions.	Treatment.	Ultimate result.
C. A—	Left	3	2 weeks	*Nil*	Orchidectomy	Healed
J. W—	Right	$2\frac{1}{2}$	2 months	Tubercular adenitis of neck	Abscess opened	,,
L. A—	Left	7	8 ,,	Tubercle of sac of tunica vaginalis	Orchidectomy	Lost
J. R—	,,	$3\frac{1}{2}$	3 weeks	—	,,	Death with sinus
L. K—	,,	3	?	—	,,	Lost
C. W—	Right	4	?	Tubercular peritonitis	*Nil*	,,
J. B—	Both	$6\frac{1}{2}$ weeks	Alleged congenital	—	,,	Death 24 hours after admission
H. M—	Left	10	1 month	—	Epididymis scraped	Lost
E. N—	,,	$1\frac{7}{12}$	16 months	—	Ditto	,,
W. C—	Right	$2\frac{1}{2}$	4 days	—	Abscess opened	,,
S. W—	Left	2	6 months	Tubercular peritonitis; tuberculosis, both lungs; tuberculosis, left vesicula seminalis	Orchidectomy	Death, few hours after orchidectomy

progresses that the testicle should be sacrificed, and then only after warning the parents of the inevitable result.

To sum up. If general hygienic and opsonic treatment do not rapidly improve a tubercular testis in a child the organ should be removed. If both testes are attacked, or if one has already been removed, orchidectomy should only be done as a last resort. The operation is quite simple, and as much of the vas as possible should be removed.

References.

Jacobson.—'Male Organs of Generation,' p. 373.

Hutinel and Deschamps.—'Arch. Gen. de Med.,' 1891, p. 257.

Curling.—'Diseases of the Testes,' p. 337.

Fuller.—'Diseases of the Genito-urinary System,' p. 108.

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Jullien.—'Arch. Gen. de Med.,' April, 1890.

McAdam Eccles.—'The Imperfectly Descended Testis.'

Giraldés, Dreschfield, Dufour, and Prostat.—Quoted by Curling, p. 337.

Owen.—'Surgical Diseases of Children,' p. 342.

(*Read March the 15th*, 1907.)

Discussion.

Mr. Frances Jaffrey said Mr. Howard's paper was very interesting indeed. He had not studied the subject himself, as he had seen so few cases of the sort. Recently he had a case in which the tunica vaginalis and funicular process were tubercular. At the time it was diagnosed as tubercular epididymitis, because it was continuous, and the funicular process was adherent down to the tunica vaginalis. But the epididymis appeared to be healthy. The testicle was not removed. The disease spread up the funicular process, and certainly was tuberculous. It was a recent case, and the child was still at the convalescent home. In another case two or three years ago the same thing happened. The child was sent up as a case of epididymitis, but it was found to be a tubercular funicular process. He had seen very few such cases. He believed that the earliest age at which they were seen was seventeen. He saw one in a gentle-

man who was intending to be a medical student, but he was dissuaded from doing so as he had an enlarged epididymis, which eventually broke down, and the testicle was removed. In his case the whole of the vas became cystic, and had to be dissected out well into the abdomen to get into a healthy part.

Dr. F. J. Poynton said one case which was interesting from a clinical point of view came under his care a short time ago, and he handed it on to a surgeon. The testicle was enlarged and heavy, and he thought everyone believed it to be a growth. The testicle was removed, and afterwards split open, and in the middle of it there was found to be a caseating tubercular focus. There was also a hydrocele. It was painless, heavy, and remarkably large for a young child. There was no thickening of the vas, which would have led to the idea that it was tubercular.

Mr. Milner Burgess (Harlesden) said that, in his experience, tubercular disease of the testis was very uncommon in children.

Dr. William Ewart asked whether there was any implication of the mesenteric glands, because, according to Nathan Raw's view, the tuberculosis under discussion would be one of bovine origin. If that were so, there would be some trace of the disease in the mesenteric glands, owing to the infection having been introduced through the intestinal route.

The Chairman (**Dr. G. A. Sutherland**) asked whether Mr. Howard found tuberculous enlargement of the testis associated with tuberculous peritonitis. In his own experience it had been not uncommon to find in tuberculous peritonitis a distinct enlargement of the testicle, usually on one side, and he had considered that to be a confirmatory diagnostic sign in connection with tuberculous peritonitis. He had not seen any cases in which the testicle presented acute inflammation calling for surgical interference.

Mr. Russell Howard, in reply, said: Complications, or rather associated tubercular conditions, were present in three cases; in one there was tubercular adenitis of the neck, and in the other two, tubercular peritonitis was present with tuberculosis of the lungs in one of them. This association of tubercular peritonitis with tubercular disease of the testis has been noticed by writers on the subject. It must not be confounded with tuberculosis of the tunica vaginalis, which is frequently associated with tubercular disease of the peritoneum, especially if the processus vaginalis is unclosed. Of two cases in which a post-mortem was done, the mesenteric glands were affected in one, and apparently not affected in the other.

THE DEATH OF DR. A. E. SANSOM.

The Chairman (Dr. G. A. Sutherland) made sympathetic reference to the recent death of Dr. Sansom, one of the founders of the Society, and one of the original members. During the first two years of its existence he was Chairman of the Council. He was well known to members of the Society, and his services on its behalf were very much appreciated. He moved that the Honorary Secretaries be instructed to write to Mrs. Sansom expressing the Society's sympathy and the regret with which it heard of Dr. Sansom's decease.

The resolution was carried in silence.

56. CONCLUDING NOTES OF A CASE OF SPLENOMEGALIC CIRRHOSIS OF THE LIVER IN A BOY AGED SEVEN YEARS.

By E. CECIL WILLIAMS, M.B.,

AND

T. E. HOLMES, M.D.

Twelve months ago one of us (E. C. W.) showed a boy, aged 6½ years, with enlargement of liver and spleen (*vide* 'Reports,' vol. vi, p. 180). There was a doubtful history of parental syphilis. The patient, however, had none of the usual signs of congenital syphilis, and his brothers and sisters were healthy. A vigorous course of anti-syphilitic treatment was pursued without any success. One of us (E. C. W.) gave reasons for believing the case to be an example of splenomegalic biliary cirrhosis described by Gilbert and Fournier.

On March the 7th, 1906, the patient was discharged improved; no jaundice; liver not diminished in size; spleen certainly smaller, and can be pushed up under

the costal margin. His motions had averaged one or two daily, and only occasionally contained any blood. The urine only once contained any albumin.

The boy was re-admitted on May the 10th. Since admission he has lost the use of the right arm and both legs. The right arm soon recovered its use. The muscles of the legs were soft and flabby; the patellar and plantar reflexes absent; liver 2 inches below the costal margin; spleen as before.

Towards the end of June the boy was not so well, had slight rises of temperature, was drowsy, and abdomen began to fill; there was œdema of the legs and hæmaturia, with blood in the motions; his mouth was ulcerated, and there were petechiæ on the legs. During the month of July paracentesis abdominis was performed three times, and $4\frac{1}{2}$ pints, $3\frac{1}{4}$th pints, $1\frac{3}{4}$ths pints, were removed. The boy was much relieved by the removal of fluid. The rises of temperature and drowsiness with petechiæ and accumulation of fluid seemed to denote an extra dose of poison in the system.

On August the 8th he could walk with assistance; no ascites, and no œdema. On August the 12th there was a slight re-accumulation of fluid—12 oz.—which was removed.

During the month of September the child gradually lost ground.

On October the 2nd 36 oz. were removed; child very anæmic; systolic murmur audible over the mitral area; skin yellowish; urine contains occasional traces of bile.

About one month before his death he suffered from diarrhœa, with profuse watery motions, often containing blood, and averaging six, seven, and sometimes more a day.

There was no fluid in the abdomen until a few days before his death, on November the 27th. There was never any leucin or tyrosin in the urine.

We think the pathological condition of the liver agrees very well with the clinical signs which have been described,

and fairly entitles this to be added to the rare examples of the juvenile type of the disease. The clubbing of the fingers and toes persisted to the end, and the child did not grow at all when in hospital.

It is difficult to say what amount of splenic enlargement justifies the use of the word "splenomegaly." In our case the spleen seemed when the child was first admitted to be of excessive size. There is no doubt the spleen did diminish in size as the disease progressed. At the autopsy the spleen was found to weigh 9 oz., which is three times the average weight of the organ in a child aged seven years. The liver weighed 1 lb. 9 oz., macroscopically it looked cirrhotic, while microscopically a coarse multilobular cirrhosis was the outstanding feature, with some increase in the number of bile-ducts. The condition cannot have anything to do with Banti's disease, which is the termination of the splenic anæmia of adults in multilobular cirrhosis and ascites. The second dentition is the earliest age at which the splenic anæmia of adults occurs, and the splenic anæmia of infants is a totally different affection, which seldom occurs after the age of two years. The poison may be manufactured in the intestine and conveyed to the liver by the portal vein, and thence to the spleen; or it may be introduced into the systemic circulation and have a selective affinity for the liver and spleen. There is no history of infectious disease in our case as in some of the cases recorded by other observers.

Notes of post-mortem examination.—Archie T—, aged 7 years. Died November the 26th, 1906. Emaciated, slightly jaundiced. Right pleura: Some anterior adhesions. Left pleura: Old adhesive pleurisy, with much thickening over posterior part of chest; considerable amount of chyliform fluid. *Lungs* rather firm and dark. Bronchial and mediastinal glands normal. *Pericardium:* Parietal layer much thickened; excessive amount of clear fluid in cavity. *Heart,* 6 oz., hypertrophied, especially left ventricle; muscle walls pale and rather

flabby, valves normal. Glands near ileo-cæcal valve rather large and red. *Large intestine* somewhat thickened, recent ulcer on ileo-cæcal valve. *Liver,* 1 lb. 9 oz., very hard and cirrhotic; right lobe enlarged; left lobe small, surface coarsely granular, "hob-nail" appearance due to contraction of fibrous tissue. *Spleen,* 9 oz., large, firm, dark; two patches of perisplenitis; rather large accessory spleen. *Kidneys,* right, $4\frac{1}{4}$th oz.; left, $4\frac{1}{2}$ oz.; cortex broad; pyramids indistinct.

(*Read March the* 15*th,* 1907.)

Discussion.

Dr. F. Parkes Weber said he had just seen the liver and had examined a microscopic section of the organ, and he thought that the cirrhosis could not be called "biliary cirrhosis." Clinically, there had been very little jaundice. Macroscopically, the appearance was that of ordinary hob-nailed liver of adults. Microscopically, the cirrhosis was not seen to be specially distributed in the interacinous spaces, but was of the ordinary coarse multilobular type, nor was there much inspissated bile seen in the sections. He believed the case to be one of ordinary cirrhosis of the liver, as met with in adults, although there was no history of alcohol. Even in some adult cases, however, no such history could be obtained. Certainly the enlargement of the spleen in the present case was no greater than sometimes occurred in ordinary cases of cirrhosis.

Dr. F. J. Poynton thought the unusual feature of the case was that the parietal layer of the pericardium was thickened but not adherent. Dr. Parkes Weber considered it an ordinary case of cirrhosis of the liver, but he must allow it was extraordinary for the pericardium to be greatly thickened in ordinary cirrhosis of the liver; in adults it was very unusual to find the pericardium in that condition. He considered that the case was much more closely allied to multiple serositis. In the present case there was perisplenitis, repeated ascites, there had been supposed chronic pericarditis and weakness of the heart for a prolonged period, and he thought the cirrhosis was due to chronic venous stagnation, possibly assisted by alcohol, which had been given for the heart condition.

Dr. Weber, in further remarks, said the class of cirrhosis to which Dr. Poynton alluded was mostly characterised by very great thickening of the hepatic capsule (German, "Zuckergussleber"), whereas there was practically none in the present case, and there could not have been much perisplenitis either.

Dr. Poynton replied that there was in this case chronic pleurisy, which he took to be the result of chronic inflammation of the pleura; there was chronic pericarditis, also perisplenitis. Therefore he maintained that the present case might well be an example of multiple serositis, or multiple inflammation of the serous membranes.

Dr. William Ewart asked whether it would be possible to submit the specimens to a committee and ask them to report thereon. The specimen he had examined was interesting, and presented features different from those of common cirrhosis which one generally found. There was an unusual proliferation inside some of the vessels.

Dr. T. E. Holmes (Bristol), in reply, said he would be pleased to submit the specimens to a committee. He agreed with Dr. Parkes Weber that the term "biliary" could scarcely be applied to the condition. There was a little interlobular cirrhosis, but it was very slight, and by far the most important condition in the liver was the very coarse multilobular cirrhosis. That was the opinion when the organs and sections were shown before the Medical and Chirurgical Society of Bristol two or three weeks ago. But no further light was thrown there on the origin of the trouble.

The Chairman (**Dr. G. A. Sutherland**) nominated Dr. Parkes Weber and Dr. Poynton to act as the committee to report on the specimens.

Report on the Microscopic Specimens by Dr. Parkes Weber and Dr. F. J. Poynton.

Macroscopic appearances of the liver.—The liver was enlarged and the surface coarsely "hob-nailed." The capsule was not greatly thickened. The left lobe was extremely small as compared with the right.

Macroscopic appearances of the spleen.—The spleen was evenly enlarged, and the capsule showed some thickening, doubtless from old perisplenitis.

Microscopic appearances of the liver.—There was a coarse cirrhosis, indistinguishable in appearance from an ordinary alcoholic one. The fibrous tissue showed various stages of development, some being in parts well-formed in other places there was only a round-celled infiltration. The appearance that was given was that of a progressive cirrhosis of the liver, but not of the biliary type.

Microscopic appearances of the spleen.—The spleen was

but little altered, but there was slight increase in the interstitial connective tissue.

Conclusions.—We look upon this as a case of hepatic cirrhosis, with considerable enlargement of the spleen. Had we not heard the clinical notes the condition would have suggested alcohol as the probable cause. A feature of the case is its association with chronic pleurisy and chronic pericarditis, with hypertrophy and dilatation of the heart. It is possible that these have an ætiological connection with the cirrhotic process in the liver, but there is not evidence to prove whether all these various chronic inflammations owned a common cause.

57. AN INFANT WITH INJURIES SUSTAINED AT BIRTH.

By SYDNEY RUMBOLL.

A male infant, aged 6 months, was brought for advice because he was unable to use his right hand. The right arm was shorter than the left, and the hand was everted. A radiogram was taken under chloroform, and showed a green-stick fracture of the right clavicle, the head of the humerus being displaced upwards and outwards. The child was unable to raise its right arm. He sought information on the appropriate treatment. Was it better to leave it alone and see what Nature would accomplish, or was it advisable to resort to surgical measures ?

(*Exhibited March the* 15*th*, 1907.)

Discussion.

Mr. Donald Armour asked whether there was any nerve injury in addition. It was difficult to judge from the skiagram, but he was inclined to suggest that some effort should be made to correct the deformity.

Mr. Russell Howard said he saw the case, and the radiogram, and he thought the case should be left alone. He gleaned

from the mother that some recovery was taking place. He thought the clavicle would probably straighten itself out well. He was not convinced of the dislocation, even from the X-ray photograph, because it was difficult to X-ray a child who had a painful shoulder, because of it not being kept steady. Moreover, upward dislocation of the humerus would be very rare. He expected a large amount of recovery to take place.

Mr. Clinton Dent said he did not see the child, but, judging from the radiograph, an operation, with the object of bringing the clavicle into position and fastening its outer end, was worth trying, because as the child grew up the deformity must become greater, owing to the inequality in the development of the two sides; at the same time he feared there was not great prospect of success as the appearance of the clavicle suggested arrest of development.

Mr. Sydney Rumboll (Leeds), in reply, said there was no nerve injury, nor wasting of any muscle or group of muscles. The doctor who attended the mother said the child weighed 14 lbs. at birth, and that it was a difficult instrumental labour, and the head of the child was marked by the instruments. He thought suturing of the acromial end would cause further deformity later, as it did not ossify until the twentieth year, completing that process at the twenty-fifth year.

Postscript.—November, 1907. The infant has greatly improved with massage and can now raise his arm and put his fingers into his mouth.

58. A CASE OF CEREBRAL TUMOUR.*

By J. PORTER PARKINSON, M.D.

This patient, a girl, aged 7 years, had been healthy till eighteen months ago, when she began to have occasional general convulsions attended by loss of consciousness and relaxation of the sphincters. Once she had eight fits in four hours.

For two months the mother has noticed that the child has been weak on the right side, and recently she has had severe paroxysms of headache lasting two to eight hours with occasional vomiting.

* For sequence see exhibit No. 84.—(Ed.)

She was a bright, intelligent, well-grown child, with typical right-sided hemiplegia affecting the lower half of the face, the arm, and leg. The gait was typically "halting." There was some rigidity and increase of the tendon reflexes; the plantar reflex was extensor on the right side. There was no other paralysis except that the tongue was protruded to the right side and sensation was normal.

Sight was good and the fields of vision normal, but there was marked double optic neuritis.

One fit was observed and the movements were much more violent on the right side.

Dr. Porter Parkinson diagnosed a subcortical tumour beneath the motor area probably gliomatous in nature, and he proposed to have the child trephined in order to preserve the sight and to relieve the headache and convulsions.

He showed the case to ask the opinion of the Society as to the advisability of this operation, and also because supra-tentorial tumours were rare at this age.

(*Exhibited March the* 15*th*, 1907.)

Discussion.

Dr. Edmund Cautley said that at the last meeting he showed a boy with a cerebral tumour, in whom the chief symptoms were optic neuritis and paralysis of one sixth nerve. The boy had developed no fresh symptoms, but the optic neuritis was more intense. He proposed to have trephining done to relieve the optic neuritis, and it might possibly prevent subsequent loss of sight. In Dr. Parkinson's case it did not seem quite so obvious that trephining was advisable. He believed there was progressive disease present, probably, as the author suggested, a glioma, which was slowly invading the motor tract. The history of epileptiform convulsions, and gradual loss of power on the right side, suggested that the tumour had started in the centrum ovale, and was invading the motor tract. The emotional condition of the patient suggested that the optic thalamus was involved. Therefore, although the operation might temporarily relieve the headache and reduce the swelling of the optic discs, he doubted whether it would do much real good.

Mr. Milner Burgess (Harlesden) asked whether there was any sugar in the urine.

Mr. Donald Armour said he could not agree with Dr. Cautley's remarks as to the inadvisability of trephining in Dr. Parkinson's case. A number of such cases had been reported, and some had come under his observation at the National Hospital, Queen Square, in which the decompressive operation had been done in similar cases to Dr. Parkinson's, first to save the sight, and secondly, if the tumour proved to be irremovable, to obtain if possible one of those rare results in which the tumour ceased to grow, and atrophied. In a recent case the patient, a boy, had already left the hospital very much improved in the number of fits, having them now at much longer intervals than formerly. He regarded the decompressive operation as the proper thing to do in the case. If trephining were done, he hoped that Dr. Parkinson would insist on having the opening in the skull large enough; it could not very well be too large. A mere trephining was absolutely useless.

Dr. Porter Parkinson, in reply, said there was no sugar in the urine. He intended to have the child trephined if the parents would consent. He had seen one or two cases of cerebral tumour in which the sight was lost for some months before death, and the chief thing the patient complained of, in spite of paralysis, and in spite of the headaches and the other symptoms, was the blindness. It was kinder to submit the patient to an operation than to run the risk of a condition like that occurring in another case.

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59. A CASE OF CONGENITAL HYDRONEPHROSIS.

By EDMUND CAUTLEY, M.D.

Jack F—, aged 3½ years, was admitted into the Belgrave Hospital for Children on February the 21st, 1907, for enlargement of the abdomen. His family history and past history were good. He was born at full-time, breast-fed for a year, had measles and pertussis as a baby.

For a year the stomach had been increasing in size, and he was said to suffer from frequent micturition and thirst. He had no pain, ate well, was never sick, passed normal stools, was lively, and felt well. Colour and nutrition were good.

Since his admission there had been neither thirst nor frequency of micturition. The urine was acid, sp. gr. 1023,

and free from albumin. The boy remained in excellent health.

The circumference of the abdomen at the level of the umbilicus was twenty-two inches. Occupying the left side and extending well back into the loin was a large, tense, slightly movable, elastic swelling. It was quite smooth, had bluntly rounded outlines, and gave a marked thrill on percussion. It occupied the lumbar region completely, and extended partly into the epigastric, umbilical, and hypogastric regions. Coils of intestine were felt in front of the tumour, which was dull to percussion, except when these coils were distended with gas. Behind there was dulness in the left lumbar region and a tympanitic note on the right side. *Per rectum*, a rounded resistant mass could be felt in the left iliac region, slightly movable on pressure from the left lumbar region.

There was practically no doubt that this tumour was a congenital hydronephrosis which required surgical treatment. (*Exhibited March the* 15*th*, 1907.)

Discussion.

Dr. Douglas Stephens (introduced) thought the tumour seemed rather too large in an infant so young to be in keeping with a hydatid growth.

Dr. F. Parkes Weber thought Dr. Cautley's view was the most probable one, namely, that the tumour was renal and partly fluid.

Mr. Donald Armour agreed with Dr. Cautley that it was very probably a cystic renal tumour, probably hydronephrosis. He did not think there would be any difficulty in treating it surgically. The tumour could be exposed and aspirated, in that way making it small enough to deliver through a lumbar incision. It would be impossible to deliver it as it was through such an incision.

The Chairman (**Dr. G. A. Sutherland**) agreed with the opinion expressed. He did not know of any other possibility. It was of very large size. He had seen one or two such cases in which the swelling was smaller. His surgical colleagues had been sure that they were cases of hydronephrosis, probably congenital, and had been anxious to operate, but with rest the swelling had always subsided. He admitted that the swellings

recurred at intervals, but the patients seemed to enjoy good health. He did not know what the ultimate result was.

The meeting then concluded.

Postscript.—On March the 19th the urine was acid, sp. gr. 1015, free from albumin and sugar. The daily quantity varied from ten to twenty-two ounces. The boy remained apparently well but was losing weight. Next day the tumour was removed by Mr. Donald Armour. Recovery took place without a bad symptom, and the wound was healed on April the 13th. Examination showed that the tumour was a congenital hydronephrosis, with little kidney substance left. The ureter and the pelvis of the kidney had not joined, each terminating in a blind rounded extremity with a minute intervening portion of connective tissue.

60. A CASE OF SARCOMA OF THE KIDNEY.

By EDMUND CAUTLEY, M.D.

George G—, aged 2 years, was admitted into the Belgrave Hospital for Children on February the 14th, 1907. An interesting point in his family history was the death of a maternal uncle, aged 32 years, from myelogenous leukæmia.

For nine months the boy's stomach had been noticed to be a little large. During the last six weeks, and still more during the last three weeks, it had increased much in size. He was easily tired, occasionally vomited, and passed normal stools.

On examination he was found to be rachitic and had only twelve teeth. The abdomen measured 23 inches in circumference at a level of 2 inches above the umbilicus.

Occupying the left side of the abdomen was a large, hard, coarsely nodular tumour, in shape somewhat like a leukæmic spleen. Its long axis ran obliquely downwards

and forwards from a point midway between the ribs and crest of the ilium to the apex of the tumour, an inch below and to the right of the umbilicus. The tumour was a little movable, and extended right back into the loin. Coils of intestine were superficial to the lump in the left iliac region. Above the main tumour was a second one which was also partly movable, and situated more in the normal position of the spleen.

The main tumour was in many features like a large spleen, but its extension into the loin, its nodular character, and the superjacent coils of intestine, were more in favour of a renal growth.

The liver was enlarged, extending almost 2 inches below the costal margin. The boy's colour was good, not at all anæmic.

March the 2nd.—Erythrocytes 4,916,000; leucocytes 20,500.

March the 7th.—Differential count of 500 cells showed polymorphs 51·4, lymphocytes 44·6, hyalines 2·8, eosinophiles 0·8, basophiles 0·4 per cent. A few nucleated red cells were found.

Up to March the 5th he lost weight. In the next week he gained 10 oz. The urine was acid and contained a trace of albumin; no blood. Food was taken badly.

The exhibitor thought it was probably sarcoma of the mesenteric glands, or a hypernephroma growing from the lower pole of the kidney and extending forward. Against the latter view was the shape of the tumour, and its direction of growth. He favoured the first view.

(*Exhibited March the 15th*, 1907.)

Discussion.

Dr. F. J. Poynton thought that, on the whole, it was a lymph-adenomatous or lympho-sarcomatous condition. If the former it would explain the enlargement of the spleen. An alternative view was tubercular disease of the abdomen, with tubercular spleen, but it seemed almost inconceivable that there could be such a craggy mass as that in tuberculosis of the abdomen. He could not make out any ascites, or any other masses of tubercle elsewhere.

Mr. Donald Armour said he saw the case in the hospital, and he agreed with Dr. Cautley that it was sarcomatous. The only point against its being sarcoma was that if it was retro-peritoneal it was more freely movable at the base than one would expect with sarcoma growing in that position, unless in connection with the kidney.

The Chairman (Dr. G. A. Sutherland) said he had seen the case, and the two conditions which occurred to him were either malignant disease or tuberculosis. He thought it probably malignant, and that it was primarily renal. The tumour was very markedly unilateral, and he agreed with Dr. Cautley that there was a distinct second mass above it, but whether this was spleen or not it was difficult to say. Perhaps Dr. Cautley would say what treatment he would employ.

Dr. Edmund Cautley, in reply, said he hoped to learn from members what was the best treatment to employ. He was anxious to have the tumour removed if that were possible. Death might occur whether it was removed or not, but if it could be taken away he thought the patient would have a better chance of living. One could not be certain that it was sarcomatous without an exploratory operation; so it was for the surgeon to say what the treatment should be. He did not expect that the tumour would be removable.

Postscript.—On March the 19th the breathing was hurried and the boy had a spasmodic cough, with general bronchitic sounds in the chest. At operation next day the main tumour was found to be renal, and the smaller one a mass of glands out of reach of removal. Death occurred on the following day.

The growth was a sarcoma of the left kidney. The surface of the lungs was covered with secondary growths varying in size from a pea to a marble.

61. A CASE OF CIRRHOSIS OF THE LIVER WITH OBLITERATION OF THE BILE-DUCT.

By J. PORTER PARKINSON, M.D.

The specimens were taken from the body of a male child, aged 5 months, who had been jaundiced since birth. This jaundice increased early in December, when the first

teeth appeared. Recently there has been vomiting after each feed. The parents are healthy, and there is no history suggesting syphilis in either.

On admission into the North-Eastern Hospital for Children the child was very markedly jaundiced; the skin and mucous membranes were universally affected. The child was very fretful and cried on being handled. The abdomen was tumid and tense, with unusual distension of the superficial veins, chiefly in the upper zone. The liver felt hard but smooth, and its lower edge, in the line of the nipple, was felt half-way between the costal margin and the umbilicus. The spleen could just be felt. There was no ascites. The stools were white and pasty and foul-smelling. The infant vomited daily and was gradually wasting. The lungs and heart appeared normal. The child gradually sank and died of asthenia twelve days after admission into hospital.

At the necropsy there was some œdema of the bases of the lungs; the heart was normal; the spleen was enlarged and the liver weighed 12 oz., was very hard, and of a darkish green colour. The edge was rounded and the shape slightly distorted. The gall-bladder was small with thick walls, and contained half a drachm of thin, colourless fluid. A probe could not be passed into the cystic duct, which was represented by a fibrous cord. At the junction of this with the hepatic duct was a small swelling, evidently a dilatation of the lumen, containing a dark, viscid substance like inspissated bile.

Microscopically the lobules of the liver are widely separated by fibro-cellular tissue, in which are large numbers of small bile-ducts, many of which are seen branching and some are filled with inspissated bile. The walls of the blood-vessels are also thickened. This fibro-cellular tissue does not infiltrate the alveoli to any extent, and the liver cells are altered little, if any, from their normal appearance. (*Exhibited March the 15th*, 1907.)

62. INFECTIVE ENDOCARDITIS; ANEURYSM; CEREBRAL HÆMORRHAGE; THROMBOSIS.

By EDMUND CAUTLEY, M.D.

Mabel C—, aged 16 years, was admitted into the Metropolitan Hospital under my care on January the 30th, and died on February the 18th, 1907. She was the fourth of five children, the others being healthy. The father had rheumatic fever at the age of forty years.

At five years of age she had measles and pertussis, chorea in 1904, and rheumatic fever in 1905.

Ten weeks ago she had rheumatic fever again for about two weeks, and since then she had been ailing with slight cough, frontal headache, and palpitation.

Present condition.—Flushed cheeks, clear complexion, and no anæmia. Tongue a little furred. Normal temperature. Pulse and respiration a little increased in frequency.

The heart was much hypertrophied and dilated, with a presystolic thrill and murmur, a systolic mitral murmur, and a much accentuated pulmonary second sound. In the third right interspace a to-and-fro soft-blowing systolic murmur was heard.

Neither the liver nor spleen showed enlargement, and the urine was normal. Some moist sounds were heard in the lungs.

On February the 1st the liver was enlarged and tender. In the afternoon the girl was drowsy, with divergent squint, occipital headache, frequent vomiting, and incontinence of urine.

On February the 2nd the squint was absent. Optic neuritis was intense in both eyes, and there were many retinal hæmorrhages, one of which was very large and post-retinal. The decubitus and symptoms were those of cerebral irritation. The knees were drawn up, the reflexes exaggerated, the plantar reflex extensor in character; the incontinence of urine persisted; vomiting

was frequent and the headache severe. The headache was more temporal and less occipital in character. The urine contained blood and albumin. Drowsiness was marked, but consciousness was about normal. She remained in much the same state until February the 4th, when she became less irritable and less drowsy. The liver and spleen were distinctly enlarged. Next day she was emotional, and her speech somewhat indistinct. Up to this time she had vomited occasionally, but afterwards there was no more vomiting for a few days.

On February the 6th no pulse could be felt at the right wrist. There was conjugate deviation of the eyes to the left.

On the 7th the liver was larger, and there was internal squint of the right eye. The double murmur at the apex was unaltered, and gallop-rhythm was heard in the fourth right interspace.

On the 8th the squint was convergent, and there was incontinence of fæces as well as of urine.

On the 9th the right arm was distinctly colder than the left, and was painful on movement. A tender thrombus could be felt in the third part of the axillary artery. There was no further retinal hæmorrhage. Next day there was much pain in the arm. Patient was still drowsy, but intelligent. For the two following days the incontinence ceased. No definite improvement took place. The spleen and liver increased much in size, the latter reaching to the umbilicus. Gradually the girl became weaker, the pain in the arm ceased, and death ensued from asthenia on the 18th. Vomiting was present during the last four days of life.

There was never much fever, the highest temperature recorded being only 101° F., and often it was below normal. The pulse ranged between 104 and 160 per minute, and the respirations between 28 and 48. The heart remained much the same throughout. It is noteworthy that the deep reflexes were considerably exaggerated and that the plantar reflex was extensor in character.

On post-mortem examination an aneurysm, rather larger

than a big pea, was found at the bifurcation of the basilar artery, chiefly involving the left posterior cerebral artery. It was secondary to embolism of the artery and had ruptured, permitting leakage of blood, which had made its way beneath the tentorium. A small subarachnoid hæmorrhage was present on the right occipital lobe. The pleura was thickened, especially on the right side; the lungs œdematous, and the bronchial glands caseous.

The heart weighed 21 oz. and the pericardium was thickened in patches. All the cavities were enlarged and their walls thickened. The mitral orifice was narrowed and the valves thickened by a ring of vegetations which extended down the chordæ tendineæ, some of which were ruptured and ulcerated. A large mass of vegetation was present on the wall of the left auricle.

An embolus was found at the commencement of the right brachial artery. The spleen weighed $12\frac{1}{2}$ oz. and contained large yellowish, softened infarcts. The kidney showed small old infarcts. The liver was congested and enlarged. The specimens shown illustrated the course of the illness. Following on disease of the mitral valve, the result of rheumatism, there had occurred a secondary infection with one or other of the various organisms which set up infective endocarditis. An embolus was carried to the left posterior cerebral artery and gave rise to an aneurysm. Possibly this aneurysm affected the optic chiasma and caused the optic neuritis, which may have been present before admission. Shortly after admission the aneurysm leaked and the resulting hæmorrhage gave rise to the headache and drowsiness. The rapid swelling of the liver was due to the backward pressure from dilatation of the heart; the albuminuria and hæmaturia to infarction and congestion; and the splenic enlargement chiefly due to infarction.

Considering the extensive size and area of vegetation on the wall of the auricle, it is astonishing that embolism was not much more frequent.

(*Exhibited March the* 15*th*, 1907.)

63. A CASE OF MULTIPLE LUPUS VULGARIS.

By GEORGE PERNET.

The boy, aged 10 years, was first seen the end of November last, with two patches of lupus vulgaris (chin and right shin) of two years' duration. The disease followed an attack of measles—a not unusual history. On December the 7th the lesions were scraped under an anæsthetic, and this was followed up by X rays (sixteen exposures to each patch). The chin patch had latterly been treated for small foci of disease.

(*Exhibited March the* 15*th*, 1907.)

64. TERATOMA FROM THE BACK OF A CHILD.

By RUSSELL HOWARD, M.S.

Charlotte R—, aged 6 years, was admitted into the London Hospital, under Mr. Barnard, complaining of a swelling over the sacrum. This had been present since birth, and was gradually increasing in size. No pain. No symptoms.

Five other children in the family. All healthy.

Swelling 5 inches by 3 inches, extending from the upper part of the sacrum to the tip of the coccyx and over on to the right buttock. The skin over it was normal and was not adherent to the tumour. The swelling varied in consistency in different parts, but was mostly soft and elastic. Hard nodules could be felt in the upper part. It was freely movable on the deeper structures, and there was no expansile impulse when the child coughed or cried.

Mr. Barnard removed the tumour with the skin over it. It was attached to the back of the sacrum by loose

fibrous tissue in which many large veins were running. The wound healed by first intention and recovery was uninterrupted.

Later, on account of the appearances found in the tumour, a cystoscopic examination was made. Both ureteric orifices were seen to be discharging urine.

On dissection the tumour was found to consist of several different parts.

The skin was readily removed and was separated from the underlying tissues by a layer of fatty subcutaneous tissue.

The largest structure present is in the lower part of the tumour, where there is a solid organ surrounded by a fibrous capsule and lying in a serous sac reflected round it in much the same way as the peritoneum is reflected round an abdominal organ.

The organ is about the size and somewhat the shape of an adult kidney, to which it bears a superficial resemblance. There is an appearance of a pelvis, and a duct leads from it which resembles the ureter, but after getting progressively smaller this duct ends blindly.

On closer inspection it is seen that there are no calices or Malpighian pyramids, that the organ is not divided into cortex and medulla, and that the kidney is more homogeneous than that of the normal kidney, there being no appearance of glomeruli or the system of collecting tubules.

The upper part of the tumour consists of a congerie of cysts of varying sizes, the largest being the size of a cherry. These cysts partly communicate and partly do not. The lining membrane varies in the different cysts. In some it is a smooth, shiny membrane looking like a serous sac; it others a velvety lining thrown into rugæ and closely resembling the mucous membrane of the intestine; whilst in a third variety there is a membrane somewhat resembling that found over the turbinate bones of the nasal cavity. The walls of these cysts are largely formed of fibrous tissue, but in some of them, and espe-

cially those lined with the thin shiny membrane, there is cartilage and fat.

Beside these cystic spaces there is a large amount of solid, fibrous, fatty and cartilaginous material which contains numerous blood-vessels. Immediately above the large solid organ first described is another encapsuled piece of tissue about the size of a Barcelona nut. This has no duct and, on macroscopic section, looks like a large lymphatic gland. Surrounding this, but quite separate from it, is a piece of bone covered with a periosteum.

This piece of bone is about an inch in length and the thickness of a quill. It lies in the tissue and has no apparent connections.

The whole tumour is very vascular and has many large veins running through it in all directions.

Microscopic structure.—It is not my intention here to enter minutely into the microscopic appearances presented by the various parts of the tumour, but to briefly mention one or two points that appear to me to be of interest.

The large tumour shows a system of interlacing tubules which are for the most part lined with a columnar or cubical epithelium, whilst in some of the tubules there is a transitional epithelium.

The varieties of epithelium met with in kidney tubules are not seen and there are no glomeruli. Many of the tubules are almost filled with rounded cells, with clear cell substance and a deeply staining nucleus.

In the intertubular substance are collections of these large round cells and masses of lymphoid cells. The section bears only a superficial resemblance to a normal kidney. Section through the mass of tissue looking like a lymphatic gland shows lymphoid tissue, with here and there a collection of cells somewhat resembling Hassall's corpuscles of the thymus. Section of the cysts show some to be lined with a well-marked stratified epithelium like that found on the surface of the body with sebaceous

glands under it, but no hairs are seen. Other cysts are lined with a columnar epithelium and some contain villi.

Further sections show cartilage, fibrous tissue, fatty tissue, and striped and unstriped muscular tissue.

Enough has been said to show that the tumour has been derived from all three layers of the embryo, the ectoderm, the endoderm, and the mesoderm, and must be considered to be a teratoma.

(*Exhibited March the* 15*th*, 1907.)

65. TWO CASES OF GLANDULAR FEVER.

By CHARLES W. CHAPMAN, M.D.

The cases I am about to relate occurred in a lady about 30 years of age, and in her daughter aged 3½ years. As the disease was more severe in the former, I propose taking that one first.

M. R—, aged 30 years, had not been in good health for two or three months, she never having felt quite strong since a mild attack of influenza in the early part of February of this year. A few days after exposure to cold winds in Kensington Gardens on March the 2nd she complained of pain in the left cervical region and stiffness of the neck, the least movement of which caused intense suffering. On examination there was marked swelling under, and anterior to the left sterno-mastoid muscle, which was found to be due to enlarged glands. Behind the muscle were some slightly enlarged glands, some of which were extremely painful to the touch. The glands on the right side were more in evidence than is normally the case. There were no lesions in the mouth, nose, throat, or ear, to account for the adenitis. The tongue was furred. The temperature was 101° F., and the pulse 80 to the minute. The axillary and inguinal glands were

not affected. The temperature went rapidly up to 104° F., but there was no delirium or vomiting. The spleen could be felt a little enlarged on the fourth day; at this time there was much pain in the left arm without any apparent cause. The fever gradually subsided, and the temperature was normal by the eighth day, and the patient was convalescent by the fourteenth day. I should have mentioned that on the fifth day there was slight epistaxis; there was also at this time lichen over all four extremities.

The child.—On March the 7th, being the fifth day of the mother's illness, the elder of two little girls, who was aged 3½ years, presented symptoms similar to those just described only of a much milder character. The swellings were not large, and the thermometer never registered above 101° F. It was curious to note that the rash in this case was apparent only under the skin, and it was but slightly irritable. There was again no lesion to account for the swelling of the glands. The child was convalescent in a week, but she had the appearance of having gone through a bad illness. The baby, aged 9 months, escaped entirely.

I have brought these cases before the Society because I know glandular fever is a disease not at all well recognised by the profession. Indeed, I have found observant men in large practices who have never heard of it. The best description I have met with is the article on glandular fever by Dr. Dawson Williams in the last edition of 'Quain's Dictionary of Medicine.' In Holt's 'Diseases of Children,' published as recently as last year, acute and chronic adenitis are discussed, but the disease we are now considering is not mentioned. Of course, it is possible glandular fever is non-existent in America. In the second (1892) edition of Ashby and Wright's well-known text-book, the authors refer to "feverish attacks with enlargement of the cervical glands, either the deep cervical at the angle of the jaw, or the glands on the upper and posterior edge of the sterno-mastoid, without any appearance of irritation in the tonsil or pharynx," and they add,

"possibly there may be such a disease as idiopathic adenitis." Reference is made to cases described by Pfeifer, Heubner, and Rauchfuss, and called by them "gland fever."

The readiness with which I recognised the disease in the present cases was due to an experience I had of the fever in my own family twelve years ago, five of whom were successively attacked. We found the house we had taken in South Wales was not as wholesome as we would have liked. After we had been there ten days the baby, who was aged 2 years, had, without any previous illness, an enlarged gland such as has been already described. The left side of the neck had rapidly swelled during the night, and the child was very ill. A few days after the onset of the illness there was such severe bleeding at the nose that he almost succumbed to the loss of blood. The other cases presented no unusual features, so I will not describe them in detail. One point, however, may be noticed in two of the elder boys, that their temperatures rose to 104° F., but in neither case was there any delirium or vomiting. I may add that it was entirely on account of the description of the disease given by Dr. Dawson Williams in one of the medical journals that I was able to recognise it in my children.

In this year's February number of 'The British Journal of Children's Diseases' appeared an abstract of a paper by Marshal in the 'Maryland Medical Journal' of the previous October on the ætiology of glandular fever. The author states that adenoids or enlarged tonsils are present in nearly every case. This has not been so in my limited experience of the disease. He says there is a general impression that the influenza bacillus and pneumococcus are the usual causes of the disease, but he states the bacteriology of it has not been worked out. Suppuration, he further remarks, may occur.

The following are the chief points in the diagnosis and progress of the disease:

(1) Rapid swelling of the cervical glands beneath and

anterior to the sterno-mastoid muscle on the left side with relatively less enlargement of the posterior cervical glands. The glands on the right side of neck also affected to a minor degree.

(2) The parotids are unaffected.

(3) The axillary, inguinal, and mesenteric glands may be affected in the course of the disease. The spleen may enlarge.

(4) The temperature varies with the number of glands involved and the severity of the attack. The thermometer may register 104° F. without causing undue anxiety. A fall should occur in one or two days unless other glands become involved.

(5) Suppuration rarely, if ever, occurs.

(6) Recovery is complete in fourteen to sixteen days, but the patient is left in a debilitated condition.

(7) Adults are rarely attacked.

(*Read April the 19th,* 1907.)

Discussion.

Dr. Porter Parkinson said he thought the members ought to thank Dr. Chapman for his very interesting paper on a somewhat obscure disease, if it were a disease. His own inclination was to look upon the term glandular fever in the same way as he did purpura, *i. e.* that it was a set of symptoms which might probably be due to many bacterial causes. And Dr. Chapman had stated that different organisms, such as those of influenza, had been found in such cases. It seemed as if the patient attacked had sufficient resistance to kill the disease at the first glandular impediment at which the organisms arrived, beyond the mucous membrane. It was difficult to say, without thorough examination, whether the mucous membranes were affected. In all such cases it would be important to obtain cultivations from the mouth and nose, so that it might be known what organisms were usually associated with the condition, also whether it was one disease, or a set of symptoms common to many diseases. He thought the combination of enlarged glands in the neck and the occurrence of epistaxis was very suggestive of diphtheritic infection, and he would like to know whether any of the cases of glandular fever had been followed by diphtheritic paralysis.

Dr. Edmund Cautley thought the affection described was worthy of the name glandular fever, because it was such a useful term. He agreed with what Dr. Porter Parkinson said about its

probable causation, but the name was so valuable that it would be well to adhere to it, restricting it to cases in which there was fever associated with glandular enlargement for which no definite cause could be found. The mere fact that examination revealed no cause did not exclude the possibility of infection through the nose or pharynx. It was known that an infection could pass through a mucous membrane without leaving any local lesion.

Dr. C. W. Chapman, in reply, said the cases he had seen had been carefully examined about the throat, but no sign of diptheritic lesion had been found, neither had any of the cases suffered from any diphtheritic sequelæ. Still, as he had remarked, his experience of such cases was very limited. The source of infection might be very far back, out of sight, but no lesion had been discovered in any case which he had seen.

66. A CASE OF ADDISON'S DISEASE.

By F. J. POYNTON, M.D.

Patient is a girl, aged 9 years. Tired and languid since May, 1906. No appetite for food since May. Vomiting early in morning, before food, began May, 1906. Attacks of pain, not severe, in lower part of abdomen, left side, and back. Skin noticed to be becoming darker in colour about March the 23rd, 1907, especially skin of face, groins, and arm-pits. Breathless on exertion. Father well and strong. Mother suffered from fistula and rectal abscesses. One brother and one sister strong and well. History of tuberculosis in mother's family (great-grandfather).

Present state.—Bronzing of skin of face and neck, axillæ and groins, front of elbow-joints and popliteal spaces, and lower part of abdomen and back. The mucous membrane of the left cheek and soft palate is bronzed; mucous membranes of fair colour. No enlarged glands. Abdominal system normal. Liver and spleen not enlarged. Cardio-vascular system: Heart's area not enlarged; heart is slightly irregular. Pulse: tension is low; rate on admission, 84 to the minute. Blood-pressure on admission, 60 mm. of Hg. Since patient has been put on adrenalin

chloride the blood-pressure has risen to 96 mm. of Hg. (highest reading). On April the 12th the blood-pressure was 88 mm. Hg., and it rose the day after the patient was put on adrenalin chloride to 88 mm. of Hg.

Respiratory system.—Lungs are normal.

Urine.—Pale, 1030 ; no albumin, no sugar.

Temperature has been a little subnormal since admission, most constantly at 98° F.

Blood examination.—Red cells, 6,120,000 ; hæmoglobin, 110 per cent. ; colour index, ·8. White cells, 23,000 per cmm. ; lymphocytes (small), 38·4 ; lymphocytes (large), 3·8. Large hyaline mononuclear cells, 11·2 ; transitional cells, 1·4 ; neutrophiles, 45·1 ; oxyphiles, 0·0.

Patient has remained in much the same condition since admission ; has not been sick. On April the 14th, in the evening, had slight pain in left side of abdomen, which lasted about two hours.

Treatment.—Ordinary diet ; adrenalin chloride (1 in 1000) ♏v t.d.s.

Opsonic index.—Two readings on April the 8th, 1·39 and 1·36. (*Exhibited April the 19th*, 1907.)

Discussion.

The Chairman (Dr. C. W. Chapman) said he would be glad if Dr. Poynton would bring a record and a pathological specimen from the case later on.

Dr. F. Parkes Weber desired to confirm Dr. Poynton's view that the case would "do for" an example of early Addison's disease, though it might not be one. The pigmentation was exactly that which was met with at the commencement of that disease. The increase in the red corpuscles of the blood might also be accounted for on that supposition, for such an increase in corpuscles and hæmoglobin was sometimes met with in early stages of tuberculosis. He had heard someone ask whether a child looking so well as the present one did could possibly be the subject of commencing Addison's disease. He could answer that positively in the affirmative. In December, 1899, he saw a young man (aged 24 years) on account of an attack of supposed influenza. This was followed by a remarkable weakness, but gradually the patient recovered. In 1901, when shooting in India, he contracted malaria, and was sent up to Darjeeling complaining of weakness, nausea, vomiting, and

insomnia. Some bronzing of the eyelids, hands and forearms was noted at that time, though no pigmentation had been observed in England. At Darjeeling he suffered from syncopal attacks, one of which was fatal. A careful post-mortem examination was made, and the reports were sent to England, partly for life assurance purposes. These stated that the supra-renal bodies were caseous and matted together. Probably, therefore, latent Addison's disease also accounted for the delayed recovery in England. Dr. Weber did not know whether the case had been published by the medical man at Darjeeling.

Dr. G. A. Sutherland said he thought the case was shown at a very early stage of the disease, so that an absolute diagnosis was difficult. Addison's disease was very rare in children, and the symptoms and signs in the present case were of a very indefinite character. He gathered that there was a history of fainting attacks and vomiting, and general aches and pains in the abdomen and back, and pigmentation. He would like to suggest to Dr. Poynton another possibility, namely, that it was a case of loss of tone of the vaso-motor system generally, which was very common in boys and girls of nine to fourteen years of age. The symptoms in those cases were much the same as those in the present child. Attacks of fainting were very common, and were often the chief reason for seeking medical advice. Common, also, were the abdominal and back pains, and pigmentation was by no means rare. He had seen it generalised, localised, and even unilateral, and as marked, if not more so, than in the present case. In the condition to which he had referred there was also a general flush on the cheeks, chin, and forehead, similar to that in the present case. He asked Dr. Poynton to ascertain whether the child had albuminuria, particularly postural, as that was common in the condition to which he had adverted. As long as the child was kept in bed there was no albuminuria, but it appeared when the patient was up and going about. He did not lay stress on the presence of postural albuminuria, except for purposes of diagnosis.

Dr. F. J. Poynton, in reply, said he was glad he had shown the case with a definite diagnosis, as he had learned about it what he wanted to know. Mr. Pernet had pointed out to him that it might possibly be melanoderma, and that was a point worth bearing in mind. In answer to the chairman, it was his full intention to cure the case by adrenalin, and, if necessary, by the injection of tuberculin, if he could get sufficiently definite information. In any case, if there were any interesting developments he would like to bring the case forward again or inform the Society as to what had happened. He was indebted to Dr. Sutherland for his suggestion about postural albuminuria, which he had not thought of; now that the patient was in hospital he would go carefully into that matter. He knew she had not albuminuria

while lying in bed. He agreed with Dr. Parkes Weber that too much stress must not be laid on the child's apparent good health; every illness must have a beginning, and there was no reason why Addison's disease should not have a quiet beginning however severe it became later. He knew the bronzing was not there before last month, so that it was quite recent in its development.

67. A CASE OF ERYTHEMA IRIS.

By GEORGE PERNET.

The patient was a girl, aged 3 years. She was first seen on March the 15th, 1907, with a history that ten

Fig. 15.

days previously the disease had commenced on the right cheek. In this situation there was a fading circular lesion the size of half a crown. On each extensor surface of the

forearms there was a well-defined, circular, raised patch, two inches in diameter, with a continuous, slightly vesicular border. Within this there was a crimson zone $\frac{1}{4}$th inch wide, with a scaly inner border. Within this, again, there was a smooth, paler red area. Now the child presented more extensive lesions occupying greater part of the extensor surfaces of the forearms, involuting about site of original patches, but showing intersecting circles higher up of same nature as those described, the borders being hard and raised. The left cheek was also now attacked by the coalescence of circular patches. The only thing wrong with the child was that the motions were very offensive, and that she had had threadworms. There were no parasites at the present moment, and the motions were improving under salol.

Fig. 15 shows the original condition.

(*Exhibited April the* 19*th*, 1907.)

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68. A CASE OF ERYTHEMA PURPURICUM.

By GEORGE PERNET.

The patient, a girl, aged 15 years, had had a hæmorrhagic rash about the extensor aspects of the legs and forearms since November, 1906. The lesions were raised, from a pin's head to a pea in size, and came out in crops. Calcium chloride had not answered as well as perchloride of iron, under which she was slowly improving. Now the rash was to a great extent in a stage of involution, showing mainly small pigmented and discoloured spots, but here and there, and especially about the dorsal surfaces of the feet, there were some hæmorrhagic lesions, some of which had broken down and were crusted. The patient was cachectic-looking. She had a natural distaste for meat and ate vegetables mainly. Two years ago she had had a similar attack. (*Exhibited April the* 19*th*, 1907.)

Discussion.

The Chairman (**Dr. C. W. Chapman**) asked whether she took fruit as well as vegetables. He did not ask as a fruitarian, but he thought the point an important one.

Dr. J. F. Leon (Southsea) asked whether in the case of erythema purpuricum there had been any external applications, or was the treatment simply internal.

Mr. George Pernet, in reply, said the child did take a certain amount of fruit. In the case of erythema purpuricum the legs had been dressed with ordinary soothing ointment - boracic acid. There was also at present in the case a secondary dermatitis, probably due to scratching, which rather masked the purpuric condition. Both the cases came into the category of erythema multiforme, which was a very extensive group and included a variety of clinical conditions.

69. A CASE OF VON RECKLINGHAUSEN'S DISEASE.

By FLETCHER BEACH, M.B.

N. P—, aged 5 years and 10 months, was admitted into the West-End Hospital for Nervous Diseases on February the 11th, 1907. The parents are Polish Jews, but the father, who speaks English, says that when N. P— was born he was perfectly healthy. There was no bony growth on the head and nothing abnormal was noticed about his back. When he was a year old the parents noticed a growth on the right side of the head about the size of a small hazel-nut. When about two years old his right eye became affected and the growth on the side of his head was about a quarter of an inch larger than before. He had previously complained of pain in the eye. Ever since the age of two years the growth on the right side of his head has become bigger, until it is of the size as now seen.

When N. P— was three years old the parents noticed a growth on the back about the size of an egg. This growth developed quickly and is now of very large size.

This is the eldest boy, and there are two younger boys

who are both healthy. The mother had no trouble, worry, or anxiety during pregnancy, but when she was six months advanced in pregnancy she was very much frightened by a fire which occurred in a house opposite to the one in which the parents lived. There is no family history of any affection of this kind on either the father or mother's side, and there is no history of consanguinity. The confinement was perfectly normal. The father and mother are both moderate drinkers, and the mother took beer and spirits when pregnant with this child.

On examination, N. P— is a fairly grown boy for his age, but there is a bony exostosis in the right temporal region larger than a walnut. There is also ptosis of the right eyelid. He has had iritis while in the hospital, and the pupil is now dilated in consequence of the treatment for it, but when he was admitted into the hospital it was of normal size. The right side of the face is much larger than the left. There is a considerable bony growth over the ribs near the scapular bone, and there are several large pigmentary patches on the back and front of the chest, which is pigeon-shaped. There are also some small pigmentary patches on the back and front of the chest, and on the arms. The bony growth over the right temporal bone is not connected with the brain in any way, for a skiagraph through the head has been taken and shows only a clear space. The affection of the eyelid does not appear to be connected with the bony growth. The boy is not mentally affected. I have brought the case before the Society as it is a curiosity, and I have never seen anything like it before.

(*Exhibited April the* 19*th*, 1907.)

Discussion.

The Chairman (**Dr. C. W. Chapman**) said he had never seen anything quite like it, and he could not throw any light on the condition.

Dr. G. A. Sutherland said that a year ago he had the patient under his care at another hospital, and had shown him at a clinical meeting of the Clinical Society, at which there was

a good deal of difference of opinion. The diagnosis he then gave was that the child was suffering from von Recklinghausen's disease. The skull was very large, but he thought the large size of the skull might be due to rickets, from which the boy had suffered, as shown in the state of the chest, and the spinal curvature. The alterations in the shape of the face on the right side would be observed to follow closely the distribution of the fifth nerve; they occurred over the fronto-temporal region, the upper eyelid, the globe of the right eye, the cheek, and the soft tissues of the gums on the right side of the mouth, without affecting the bone in any way. The soft tissues on the right side of the face were irregularly thickened, as compared with those on the left side; there was no uniform enlargement on the right side. What was the explanation of that? With regard to the definite swelling on the right frontal region, when he had that skiagraphed there was no evidence of bony thickening. One felt a firm mass there, with a considerable number of irregular thickenings, some of which were in strands. He suggested that they were small neuromata in the course of the nerves. The marked hypertrophy of the upper eyelid was a condition of elephantiasis, of which several cases had, during the last few years, been shown at the Ophthalmological Society. The globe of the eye was enlarged in the present case; in a similar case the tissues had been examined microscopically by Mr. Treacher Collins, who found that the hypertrophy of the upper lid was due to a condition of neuro-fibromatosis. Mr. Collins did not express a very definite opinion as to the cause of the hypertrophy of the globe of the eye, but thought it was due to an interference with the circulation in the eye itself. The swelling on the right cheek would be found to consist of a number of small irregular thickenings, confirming the view as to neuro-fibromatosis. With regard to the skull changes, the skiagram showed that the orbit was very much larger on the right side than on the left, which he thought was secondary to the enlargement of the globe of the eye. The pigmentation was a very interesting feature, and seemed to be the one point necessary to clinch the diagnosis which he had suggested. Pigmentation of that nature was very rare in childhood, whereas it was very common in von Recklinghausen's disease. In the boy there were large patches of pigmentation over the trunk and numerous small spots. He did not dogmatise about the case, but there seemed little alteration since he formed his diagnosis, except an increase of the swelling on the frontal region. He was afraid of the growth becoming malignant, a result which had happened in many similar cases.

Dr. F. Parkes Weber said he had now seen the case on three occasions, and he had no doubt it was an instance of neuro-fibromatosis or Recklinghausen's disease, though of an

unusual class. Dr. Weber divided Recklinghausen's disease into three classes. The first and least uncommon class showed fibrous thickening of nerves (elephantiasis nervorum) and multiple mollusca fibrosa. The neuromatous cords and subcutaneous mollusca fibrosa might or might not occur together in the same patient. With them there was often associated pigmentation of the skin. In the present case, on the right side of the head one felt some cords, which he (Dr. Weber) thought could only be elephantiasis nervorum. In addition, the boy had scattered *café au lait* patches of pigmentation of various sizes on the skin of the trunk. These were typical of the pigmentation of Recklinghausen's disease, excepting that they were all rather too much of the same tinge. This (the main) class of Recklinghausen's disease had been thoroughly described by Alexis Thomson in his well-known monograph 'On Neuroma and Neuro-fibromatosis,' published in Edinburgh in 1900, the classical work in the English language on the subject. Dr. Weber believed this boy belonged to the second class of Recklinghausen's disease, which consisted of cases of neuro-fibromatosis accompanied by exostoses or diffuse bony overgrowth. He had looked up the records of one or two such cases. One was described by Benaky as a "general neuro-fibromatosis, with molluscum pendulum of the right side of the face," in the 'Annales de Derm. et de Syph.,' for November, 1904, p. 977. In that case there were deformities of the cranium, vertebræ, and tibia. In February, 1906, Mr. Ludford Cooper brought forward a case at the Ophthalmological Society, which he described as neuromatous elephantiasis, in a girl aged 11 years. The outer and lower portions of the frontal bone and the squamous portion of the temporal bone were much more prominent on the affected side. Mr. Jonathan Hutchinson had described and figured ('Polyclinic,' July, 1901, p. 12) the case of a woman with multiple mollusca fibrosa, whose right cheek was bulged by bony overgrowth; the right frontal bone was likewise thickened, and the right eye pushed forward as if by bony growth behind it. The most extreme example of this class was the famous "elephant man," whom many doubtless remembered having seen when he was at the London Hospital. Treves, in his description of the "elephant man" ('Trans. Path. Soc. London,' 1885, vol. lxxxvi, p. 494) mentioned that the deformities of the osseous system were limited to the skull, right upper extremity, and feet. "The proportions of the head were enormously increased, and its general outline was that of a hydrocephalic skull." Dr. Weber pointed out that such cases with bony deformities constituted a distinct class of Recklinghausen's disease, a class to which, in his (Dr. Weber's) opinion, the patient shown by Dr. Fletcher Beach belonged. Whether the boy in question would develop into another "elephant man" remained to be seen. A probable third class, or "forme fruste" of

Recklinghausen's disease, was illustrated by the case shown to the Society by Dr. Weber in November, 1905 ('Reports,' 1906, vol. vi, p. 62). This third class comprised cases of cutaneous pigmentation similar to that met with in the first class, but without any obvious neuro-fibromatosis. In such cases, however, there might perhaps be deeply-situated neuro-fibromata which escaped detection on clinical examination.

Mr. Sydney Stephenson said that the condition of the right eye, the lid, and orbit seemed to him to be very characteristic of neuro-fibromatosis. Some attention had recently been paid to those cases, but he need not go into that, because Dr. Sutherland was evidently familiar with the literature. The so-called ptosis in the case was certainly due to heaviness and thickening of the lid; and on careful palpation he thought he felt a curious impression, like that caused by feeling a bag of worms beneath the skin. The displacement of the eyeball was probably due to the development of similar tissue in the orbit. The eye was now red, and the pupil was enlarged by atropine, and he gathered from Dr. Fletcher Beach that there had been a condition of iritis. That led him to inquire whether Dr. Beach suspected that the child was the subject of syphilis; because apart from injury, he knew scarcely any cause of iritis in children except congenital or inherited syphilis. There was, moreover, a condition present which might account for the redness of the eye, namely, inversion of the lashes of the lower lid. That, like the other changes, might be congenital, or it might be due to the fact that in a hypertrophic condition of the lids one found cilia take on an exuberant growth, and in that case the thickening might account for the malposition of the lashes. Under any circumstances, he regarded the case as one of neuro-fibromatosis (plexiform neuroma), associated with buphthalmos.

Dr. Fletcher Beach, in reply, expressed his obligations to those members who had discussed the case. He was sorry he had not paid so much attention to the eye as he should have done. The iritis came on in the hospital. He was away through illness for three weeks, and on his return the iritis was present. The pupil was now dilated as a consequence of the atropine. He had not been able to go carefully into the size of the eyeball, which he recognised, as pointed out by Mr. Stephenson, was much larger than the other. He recognised that there was thickening of the nervous cords, as Dr. Parkes Weber had pointed out, but to him the most important feature of the case was the bony outgrowths, especially on the side of the head. The latter began when the child was two years old, and was then the size of a hazel-nut. Now, at 5 years 10 months, it was much larger. No doubt it was connected with the skull, not with the brain.

70. A CASE OF (?) NEUROSIS, (?) ENCEPHALITIS.

By T. R. WHIPHAM, M.D.

The patient is a girl, aged 8 years. Her maternal grandmother is addicted to alcohol. Her father is the illegitimate son of a publican and his barmaid, and the laxity of morals surrounding his origin is further evidenced by the fact that the publican's lawful wife had a child within a few days of his birth. The patient's mother was married at the age of sixteen at her relations wish, as it was supposed that her husband had money. The girl, whom I have shown to the Society to-night, was born a year after her parents' marriage. Three years later they had another girl, a very small, quiet, reserved child, but intellectually bright; a little after a rickety boy, and quite recently another child, who is said to be the healthiest of all. My patient's father is an habitual drunkard, who has met with numerous accidents as the result of his potations, and from all accounts may be described in common parlance as a thoroughly bad lot. When quite small the child saw her father try to cut his throat with a razor, which necessitated his stay in hospital for some time, and she was also present on another occasion when her mother discovered him trying to hang himself. Both these incidents made a great impression on the child's mind, and she has apparently brooded over them ever since. About two years ago her mother, acting on the advice of her relations, tried to bring home to her husband the necessity for doing something for his children, so one day she rather misguidedly left the house with most of the furniture, leaving her husband alone with the children for about a week. He was drinking heavily at the time and treated them very badly, threatening to murder them and to "cut them up into small pieces like cat's-meat." This further terrified my patient, and has left a vivid impression upon her mind. At last, the father, while drunk, had an accident in the street, and was taken to hospital, and the

children were sent to the workhouse for a few days. The mother then came back, and has remained with them ever since. The father was soon afterwards sent to Canada, where he now is, and where I trust he will continue to remain. The mother is really not a bad sort of woman, who tries to do her best for the children, and my patient, at all events, is very fond of her. As the home is rather a wretched one, and insanitary, and their only income is 7*s.* 11*d.* a week, which the mother earns at a laundry, the child was sent about eighteen months ago to a Roman Catholic School by one of the Local Government Board's inspectors, who knows the mother's family. Although the child has been brought up as a Protestant, the Roman Catholic School was selected as being the best for that class of child that the inspector knew. Before going to the school the child is described as having been a vivacious and lovable girl, gentle and refined, though latterly she had become somewhat depressed and sad. About eight months ago the mother saw the child at the school, and noticed nothing wrong with her. One month later the patient was noticed to "stutter," and soon she became deaf. The deafness came on rapidly, but not suddenly, and the child states that it began on the left side. A stridor while breathing developed, and the upper eyelids began to droop. At the end of last November the mother took the child home, and a few days later brought her up to me at the Evelina Hospital. The child, according to the mother's account, has had no previous illness, but the medical officer to the school informs me that she was under his care just a year ago with a large ulcerating patch on the buccal mucous membrane opposite the left lower molar of the size of a two-shilling piece, which the dentist said was not due to the tooth. The ulcer was very offensive and very intractable, but it gradually healed with mouth-washes and tonics. In May or June last the condition recurred, and again healed under the same treatment. Four years ago the patient had what is said to have been quite a superficial wound on the forehead, which was

sewn up at Guy's Hospital. The resulting scar can still be seen.

When I first saw the child in December last I noted that she was small for her age, well-nourished, and intelligent. She bore a studious, calm look; her face was placid and immobile, and lacking in expression and brightness. There was ptosis of both upper eyelids, and the forehead muscles were not moved, even when she was told to do so. The bridge of the nose was somewhat flattened, and the eyes were rather far apart. There was no paralysis of the ocular muscles, but the left pupil was slightly larger than the right; both reacted to light and accommodation. Slight lateral nystagmus was present. The fundi were normal. The child's sight was good, and she could read and write easily, but she spoke in a thick, slurring manner with indistinct articulation and an occasional inspiratory stridor, frothy saliva at the same time protruding from the lips. The stridor was most marked when she cried. Her hearing was defective; she did not appear to hear words spoken to her, though she understood her mother, when speaking slowly and distinctly, by carefully watching her lips. To various tests of hearing she gave very unreliable answers, evidently saying what she thought would please, *e. g.* she would say that she could hear a tuning-fork held about nine inches from the ear, and also when it had not been struck, likewise a watch that was not going. On the other hand she described the sound of a tuning-fork held against her head as "musical," though she gave no indication, either muscular or otherwise, of hearing a sudden loud noise made immediately behind her while her attention was drawn to something else. No abnormality could be found in the ears, both meatus and tympana appearing healthy. The gustatory and olfactory senses were normal. There was, however, an apparent indefinite and irregular abnormality of sensation, a light touch on various parts of the trunk, limbs, and face not being felt. She allowed a pin to be driven for fully half an inch into her arm, when it evidently began to hurt, but

she resented being pinched, and had a painful blister on the palm of one hand. Intellectually she was bright, and in some ways preternaturally acute. With strangers she was very reserved, and resented being laughed at by the other children. The viscera were normal. Within a week or so of admission into hospital the ptosis entirely disappeared, and no abnormality of sensation could be detected. She gradually became much more lively and talkative, but was very precocious. She talked freely of babies, marriage, and sweethearts, and wrote prolific letters to the nurses and doctors, the letters being of an endearing nature. The deafness apparently became less constant, and occasionally she would answer questions spoken in an ordinary voice. Her general demeanour, however, continued quiet, and she would not "let herself go" and laugh like other children. There was no sickness, headache, or earache, and except for her mental condition her health was good. At Christmas time she was quite lively, and was the only child in the ward to penetrate the disguise of "Father Christmas." She was sent home soon afterwards, and when I saw her again in February the stridor had become more marked, except when she talked or was very intent upon something. The deafness remained as before, but she readily understood by lip-reading. She complained of a noise "like a gramophone" in her ears, which began and stopped suddenly, and was frightened of rats, about which she often talked, though she had not seen them. She was also nervous of the dark, but had no actual night-terrors. I took her into hospital again about a fortnight ago, and her condition now is much the same as when I saw her first, though there is no ptosis and no nystagmus. The forehead is immobile. The right eye is not closed as tightly as the left, and the right naso-labial fold is a trifle less marked than on the other side. The tongue is protruded slightly to the left, and its surface is in folds as though from atrophy of the muscles. The deafness has not really improved; the stridor is still present and occurs during sleep, and the articulation is unchanged. She is

still the same sensitive, precocious child, who talks of religion and maternity, and who writes letters beginning "My dear sweetheart," and ending with "God bless you" and rows of kisses. By nature she is very docile and affectionate, and except for the defects I have mentioned she seems in good health. I may perhaps add that the larynx is normal in appearance, and that there are no adenoids present. The sight is good and there is no limitation of the visual fields.

I was at first inclined to the belief that the onset of her symptoms might be attributed to restrictions and regulations at the school to which she was sent, and to the observances of the Roman Catholic religion to which she was unaccustomed. I have visited the school, however, and found it excellent, the only thing to which I could take exception being that the dormitories were rather crowded. The children are given plenty of freedom and amusements, and they one and all look well and happy, while only half an hour a day is devoted to religious subjects. The medical officer to the school, who, by the way, is not a Catholic, fully confirms my opinion that the children are treated with kindness and even liberality. Still, although the school life may not have been the primary cause of the child's defects, it is significant that the symptoms began after she had been for a few months in the institution. The child has stated that after going to bed she would lie awake at night and brood over her father's ill-treatment, and it is possible that the unwonted surroundings acting on a nervous system, which was originally unstable owing to the alcoholic antecedents and had been rendered super-sensitive by the tragedies of her home life, induced the objective conditions which the child presents. Her talk of marriage, confinements, and maternity I rather attribute to the injudicious tone of her parents' conversation. There is no doubt that the mother, as is so often the case in that class of life, has frequently made use of expressions unsuited for the ears of a child, and her father is said to have attempted, on one occasion, at

all events, to make the girl say that her mother had misconducted herself with a lodger in the house. The wonder to me is that the child should be as affectionate and docile as she is considering all that she has gone through.

In considering a case of this sort there is always a possibility that syphilis may be the *fons et origo mali.* Hutchinson has described a form of deafness occurring in older children, which he states is almost invariably due to lues. The onset is sudden and without pain and frequently there is no otorrhœa. Considering the antecedents of my patient the existence of syphilis is not improbable, but I could obtain no history of the disease, and a course of syphilitic treatment has had no beneficial effect, as far as I can judge. Moreover, the medical officer to the school pursued the same course when the child was suffering from ulcerative stomatitis, and at that time also the special remedies were of no avail.

Another alternative is that the patient is suffering from a disseminated cerebral lesion—an encephalitis. The points in favour of this view are the long duration of the deafness, stridor and blurred speech ; the inability to raise the forehead and to close the right eye tightly; the diminution of the right naso-labial fold, and the left-sided weakness and the atrophy of the tongue.

I shall be glad to hear the opinions of the members of the Society, firstly, as to the diagnosis; secondly, as to the prognosis concerning the child's mental and moral states; and, finally, as to the best course to pursue with regard to her present condition and her education in the future.

(*Exhibited April the 19th,* 1907.)

Discussion.

Mr. George Pernet asked if the cerebro-spinal fluid had been examined for lymphocytosis. He would like to hear what anti-syphilitic treatment was carried out. The deafness, inequality of pupils, and other facts were all in favour of syphilis. He did not think, in a case where the nervous system was so severely involved as in this patient, that the treatment pursued had been at all adequate [*vide* Dr. Whipham's reply]. Anything short of

mercurial inunction he considered useless. The inunctions should be carried out under proper supervision, of course.

Dr. F. J. Poynton said it was difficult to argue from one case to another, but one did meet with most remarkable cases of nervous breakdown in some of the children of unfortunate parentage. He had had a striking instance of that in a child who was in some ways different, but in other ways resembled the present one, the antecedent history being not so bad as the present one, but still very bad. The child went to a school where there was a good deal of religion, and also to Sunday school. It was at the time of the Torrey-Alexander crusade in England. That little girl went completely off her head, and sang the "Glory Song" all day long. She was brought to his out-patient department in a condition of almost acute mania. A good result was attained by isolation, and finally sending her away into the country for a long time. He had seen her since, and, so far, she had not relapsed. He thought it would be wise to continue the present patient at the school she was attending, special instructions being given to those who were connected with her welfare there, in the hope that special discipline and the controlling of her tendencies would improve her. He would not apply any further mercurial treatment. If the lesion was syphilitic, which was doubtful, it was not the sort of lesion in his opinion that benefited from long courses of mercury. He did not think the prognosis as to the deafness was at all good, but as he did not know the cause of the deafness he could not give a clear idea. He did not think the ultimate end of the case would be very satisfactory, for he thought it was a degenerative process.

Dr. T. R. Whipham, in reply, said the cerebro-spinal fluid had not been examined. The anti-syphilitic treatment she had had was grey powder and liquor hydrargyri perchloridi, with potassium iodide. He was obliged to Dr. Poynton for his advice about sending the child back to school. His own idea had been to let her lie fallow for a time, perhaps in the country, and then to send her back to school. At first she expressed great repugnance to going back to the school, but latterly had said that she did not mind doing so.

71. A CASE OF ENCEPHALITIS SUPERIOR CAUSING HEMIPLEGIA AND APHASIA.

By J. PORTER PARKINSON, M.D.

A FEMALE child, aged 2 years and 4 months, was admitted into my wards at the North-Eastern Hospital for

Children on February the 25th, 1907. The illness had begun suddenly a fortnight previously with fever and a convulsion. She was treated by a doctor for pneumonia. Five days before admission it was noticed the left arm was paralysed, then the right arm and leg became useless, the mouth was drawn to the left, and the left eye squinted. She vomited several times. Her previous health had been good, as was that of her family.

On admission, there was paralysis of the right arm and leg, and of the right side of the face; slight nystagmus. Knee-jerks present and increased on the right side, where the plantar reflex was extensor. The fundi of the eyes were normal. She was quite conscious and intelligent, recognised her relations, and understood all that was said to her, but she could not reply except by an inarticulate noise; previous to this she had been intelligent and talkative. She had occasional screaming fits. During the following month there was some slight return of power in the right side, especially in the leg, and on March the 24th the child was heard for the first time to repeat one or two words and to say "2, mother, 2"; after this she was noticed to repeat words said to her by the nurse, such as "must not sit up," etc. Since then speech has gradually been returning, and the power in the paralysed parts is greater, so that she is now able to walk a little. Rigidity is appearing in the arm and leg, and the reflexes are becoming more exaggerated. The electrical reactions are normal, except of the flexores longus and brevis digitorum of the right leg, which react to neither galvanism nor faradism. (*Exhibited April the 19th,* 1907.)

72. A CASE OF CONGENITAL ABSENCE OF THE LEFT UPPER EXTREMITY.

By DUNCAN C. L. FITZWILLIAMS, M.B.

The girl, aged 11 years, has congenital absence of the left arm, with marked spinal curvature due to the un-

balanced weight of the right arm. A small scar is seen behind the acromion process. The clavicle is well developed. The scapula is small. The muscles to the shoulder girdle are well developed, and move the clavicle and scapula freely.

The mass felt on the left side of the neck is due to the curvature of the spine. No cervical rib is present. No history of any other deformity in the family.

(*Exhibited April the 19th*, 1907.)

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73. CASE OF MULTIPLE ABSCESSES IN A CHILD.

By DUNCAN C. L. FITZWILLIAMS, M.B.

History.—Child, male, aged 9 months, brought to the Hospital for Sick Children, Great Ormond Street, to-day. Has been fed exclusively on the breast. Mother in good health ; only child, no miscarriages.

At Christmas time the first abscess appeared and burst. The others have gradually appeared since that date ; only one or two have burst.

The abscesses are distributed as follows : Right tibia 1, right thigh 2, right buttock 2, scrotum 1, left ankle 1, left calf 2, left buttock 4, right upper limb 2, left upper limb 3, head 9 : total 27.

(*Exhibited April the 19th*, 1907.)

Discussion.

Dr. L. A. Clutterbuck asked whether the opsonic index was taken.

The Chairman (Dr. C. W. Chapman) said that many years ago he had a similar case of abscesses, and nothing did any good for it until he drew the bow at a venture and gave small doses of iodoform. The effect of the iodoform internally was very remarkable, for after a week's treatment the abscesses healed up and did not recur.

Mr. D. C. L. Fitzwilliams, in reply, said he had seen one or two similar cases before, but not so severe, with symmetrical abscesses over the the head. On both sides they were connected

with bone and healed very well. They contained very thin pus. There was nothing caseating. From the history of the mother, two of the abscesses had burst and discharged, and one was discharging at the present time. He had not had the opportunity of examining the mother's breasts or lungs, but he asked her whether she was healthy and had plenty of milk, and she answered in the affirmative. No history of syphilis or consumption was given on inquiry, but he would examine her. He only saw the child that afternoon so that the opsonic index had not been taken. He thanked the chairman for his narration of a case which had been cured by the administration of iodoform.

74. SPECIMEN OF A SYREN FŒTUS.

By DUNCAN C. L. FITZWILLIAMS, M.B.

The mother was delivered at what she thought was the eighth month. The fœtus presented by the breech; there was no difficulty in delivery. The lower extremity was bent on, and lay behind the trunk. The X-ray photographs show the pelvis normal. The femur is thick. The bone in the lower segment of the tail is composed of two bones partially separated at the upper end. There is a nodule of bone lying free. The bones of the paddle-like foot are normal; the fourth and fifth toes are webbed. The bones of the tail are denser than normal. Probably the two femora are fused, and the tibiæ partially fused. The segment of one limb below the ankle is absent.

(*Exhibited April the 19th,* 1907.)

75. A CASE OF ADHERENT PERICARDIUM AND MORBUS CORDIS.

By T. R. WHIPHAM, M.D.

The patient, a girl, aged about 11 years, has a rheumatic history, her father having had rheumatic fever, and one other child in the family having died from the same

disease. The patient herself had a severe attack of rheumatism about eighteen months ago, her only other illness being measles three years previously. In August last she came under my care with well-marked pericarditis. The heart was enlarged, and at the apex a systolic murmur, following the first sound and conducted outwards, was present, but the second sound was inaudible. In the pulmonary area the second sound was accentuated, but in the aortic region scarcely any sounds could be heard. A little later an intermittent squeak, which did not appear to have any relation to respiration, developed in connection with the systolic murmur. This, however, disappeared after a time. A month after admission the heart was still further enlarged, and at the apex both sounds were replaced by murmurs; the systolic was loud and rough, and the diastolic soft, the latter being audible over only a limited area, while at the base the sounds in the aortic region were still remarkably faint. The diastolic murmur was subsequently heard over a wider area, being conducted outwards into the axilla and upwards to the third left interspace, where it was lost. After a further period of rest this bruit almost disappeared, and after a ten weeks' stay in hospital the patient was discharged. During the last five months she has had two attacks of heart-failure, from the last of which she has just recovered, and the diastolic bruit has varied in intensity from time to time. There is now evidence of considerable enlargement of the heart, and a definite systolic retraction in the region of the left nipple indicates, I think, an adherent pericardium. At the apex the first sound is followed by a well-marked systolic murmur conducted outwards, while the second is replaced by a soft diastolic murmur, limited to the region of the apex. When in bed the diastolic bruit changes somewhat in time, and is heard during the later part of the diastole instead of at the beginning. The second pulmonary sound is accentuated, but in the aortic area both sounds are very indistinctly heard. The pulse has a fair tension and is not collapsing. The case

I take to be one of adherent pericardium with thickening and rigidity of the mitral valve. The diastolic murmur I consider to be indicative of a slight degree of mitral stenosis. (*Exhibited April the 19th,* 1907.)

Discussion.

The Chairman (Dr. C. W. Chapman) remarked that it was impossible to listen to a chest with any satisfaction in the adjacent room, with all the talking and noise which was going on. The retraction of the chest wall at the intercostal space was very well marked, and was significant of adherent pericardium.

Dr. F. J. Poynton asked whether it was not possible for a child to have a very large heart and yet no adherent pericardium, and to have well-marked retraction of the intercostal spaces? He did not say that in any quibbling spirit, but to arrive at a statement as to whether it was possible to diagnose with certainty adherent pericardium in a child. He thought a large heart in a small chest would cause as much retraction when there was no adherence of the pericardium as when there was. He also thought the shifting of the apex beat was also useless in diagnosis. He thought the position with regard to children was that one might say the pericardium was adherent, and the chances were that one would be right, because many children had pericarditis, but he did not think it was possible to make certain of that diagnosis. He had seen cases which were certainly diagnosed as such during life show no signs of it post-mortem. He was referring to children under the age of twelve years.

Dr. Porter Parkinson asked what was Dr. Whipham's opinion as to the effect of adherent pericardium upon the heart. Did he consider that the bad prognosis, which was usually fulfilled in those cases, was due to the adherence of the pericardium, or to the effect on the myocardium of the disease which had caused the adherence of the pericardium?

Dr. L. A. Clutterbuck asked whether the *pulsus paradoxus* had been noticed in the case.

Dr. T. R. Whipham, in reply, said he had always found the diagnostic value of signs very unsatisfactory; as a rule one found adherent pericardium when one had not diagnosed it. In the present case he based his diagnosis on the facts that the child had had a recent pericarditis, and that a short time afterwards the retraction in the intercostal space in the region of the left nipple developed; it had not been there before. He was not prepared to dogmatise as to whether the effects of adherent

pericardium were due to the disease *per se*, or the result of myocarditis. He thought that myocarditis, valvular lesions, and enlargement of the heart had a great deal to do with the after-effects, and that an adherent pericardium rather hampered an enlarged and diseased heart. Probably defect in the myocardium and valve lesions were the most important factors. He had not observed the *pulsus paradoxus* in the present case.

76. A CASE OF DOUBLE RETAINED TESTES.

By J. H. TALLENT, M.B.

Aged $2\frac{1}{4}$ years. Both scrotal sacs empty. When six weeks old a swelling appeared in the right groin, the nature of which was, so the doctor in attendance said, uncertain. This reappeared last October, and has since then been down about a dozen times. It has always reduced itself in about five minutes, though while present the child was in great pain. On the last occasion it did not go back, so he was called in to see the child. The swelling was, he believed, an ordinary inguinal hernia, *i. e.* composed of bowel.

He could not feel any trace of testis. The hernia was reduced without any anæsthetic.

He ordered a single right inguinal truss, which has since been worn. A single truss was ordered in preference to a double one, to give the left testis a chance to descend.

He would like to know whether in the opinion of this Society the child should wear a truss, and if so, single or double, or whether anything further, perhaps of a surgical nature, should be attempted. Further, what were the chances of one or both testes descending now?

(*Exhibited April the 19th*, 1907.)

77. A CARTILAGINOUS NASAL TUMOUR.

By FRANCIS JAFFREY.

An infant, aged 6 months, with a cartilaginous tumour attached to the whole length of the left side of the septum of the nose, was shown. The tumour all but filled up the left side of the nose, and was seen just inside the anterior nares. It bled very readily on manipulation; the child was otherwise quite healthy.

(*Exhibited April the 19th,* 1907.)

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78. A CASE OF SYMMETRICAL CONGENITAL DEFORMITY OF THE EARS.

By C. O. HAWTHORNE, M.D.

The auricle on each side was much distorted, and the external meatus absent. The child possessed some degree of hearing, showing, presumably, that the internal ear was of normal development.

(*Exhibited May the 3rd,* 1907.)

Discussion.

The Chairman (**Dr. T. R. Whipham**) asked whether any tests of hearing had been tried by the use of tuning forks, or other means.

Mr. Russell Howard thought it difficult to apply such tests for hearing, because the child could not speak. The only information obtainable was the statement of the mother or anybody living with the child that the patient was conscious of sound. One would expect that the child could hear, although the ears were in such a deformed condition. The patient was interesting from an embryological point of view. It is known that the external ear and the middle ear are entirely different in their development from the internal ear. The pinna and the external auditory meatus are developed from the outer part of the first cleft, the middle ear and the Eustachian tube from the inner part of the same cleft, the tympanic membrane being the cleft membrane itself. The internal ear on the other hand is

developed from an outgrowth from the primary vesicles of the brain, growing into the periotic capsule. When the condition of things as exhibited by the patient occurred in the external ear, the meatus and the middle ear were generally absent. The internal ear was often perfectly developed, so that the child would be able to hear through bone conduction. The treatment of such cases was a difficult matter. It might be possible to cut down behind the ear, and see if an artificial meatus could be made. The objection to that would be that there was no middle ear; there would be merely an opening in the skull, and if such an opening were made, it would be very difficult to keep it open. He could not say whether any improvement in the hearing would occur.

Mr. Lockhart Mummery thought it likely, from what the mother said, that the child could hear, as it knew when a bell was rung, and he thought it could be tested by the use of a very large tuning fork or a bell. One could tell by watching the child's eyes whether it heard or not. If the experiment showed that the child could hear loud noises, he would be inclined to operate on one ear, by cutting down on one side, and exposing the surface of the internal ear, making a kind of channel down to it. If that ear were made better by it, the other could be operated on at a later period.

Dr. C. O. Hawthorne, in reply, said the remarks which had been made left him in a difficult position as to what advice he should give to the parents. He had tried tests, such as the clapping of hands and the snapping of fingers, and he thought it certain that the child had some hearing, which he assumed was accounted for in the way suggested by Mr. Howard.

79. A CASE OF DEXTROCARDIA AND MORBUS CORDIS.

By C. O. HAWTHORNE, M.D.

The patient was a lad, aged 14 years. The evidence was in favour of the view that the position of the heart was a congenital peculiarity, though transposition of the liver or other viscera could not be recognised. There was extension of the cardiac pulsation and dulness considerably beyond the right nipple line, and a systolic murmur, heard most distinctly in the region of the cardiac impulse, was conducted round the right side

of the chest. On these facts it was argued that the case was one of true transposition of the heart, and not one of mere cardiac displacement. In such circumstances the ventricle placed to the right would be the systemic ventricle and would possess the mitral valve; hence mitral disease would produce a murmur (or murmurs) heard over the cardiac impulse and conducted towards the right—the facts, in short, which were present in this case. In consequence of the dyspnœa from which the lad suffered, it had not been possible to obtain a skiagram; this would have been of special value as showing whether the arch of the aorta, as might be expected in such a case, was on the right side. (*Exhibited May the 3rd,* 1907.)

Discussion.

The Chairman (**Dr. T. R. Whipham**) agreed that there was a mitral lesion.

Mr. Russell Howard said there were two arches to the aorta, and he thought there was every reason for believing that, if the heart was on the right side, the right arch would persist instead of the left arch.

Dr. F. W. Higgs agreed with Dr. Hawthorne that there was true congenital dextrocardia and that there was mitral regurgitation. He considered that the manner in which the apical systolic murmur was conducted outwards into the right axilla supported the view that the systemic ventricle was on the right side of the pulmonary ventricle, *i. e.* that the position of the ventricles was reversed. He thought, however, that the systolic murmur also heard at the base of the heart and conducted towards the apex, indicated that there was co-existing congenital aortic stenosis, and that this idea was supported by the presence of very considerable dilatation and hypertrophy of the systemic ventricle, which seemed greater than would be accounted for by the mitral lesion alone.

Dr. C. O. Hawthorne, in reply, said he thought it highly probable that the case was not exhausted by the statement he had made that it was an example of mitral regurgitation and mitral stenosis. It was difficult, in a crowded room, to hear all the niceties of cardiac murmurs, but if the patient were taken to a very quiet room and carefully listened to, it would be found that there was not only a systolic murmur at the base, but also a faint but undoubted diastolic murmur. He therefore thought it probable that aortic disease existed, as well as mitral disease. He had not advanced that diagnosis, because it was not the

feature of special interest. But he emphasised the other side of the case, because he desired to suggest that the teaching of the case was in reference to the differentiation between the mere displacement of the heart and a true visceral transposition.

80. A CASE OF PATENT DUCTUS ARTERIOSUS IN A GIRL, AGED NINE YEARS.

By CHARLES W. CHAPMAN, M.D.

E. L— came under my observation as an out-patient four years since, when she was five years of age. She complained of occasional attacks of unconsciousness, with rigidity of the limbs, and blueness of the lips after having a bath. She had measles with bronchitis one year previously.

When first seen the child was pale rather than blue. On examination the cardiac dulness was practically normal. Over the upper third of the sternum an almost continuous light booming sound, rarely synchronous with the pulse, was heard. The other organs were apparently quite healthy. On December the 22nd, 1904, the patient had a "fit," another in March, 1906, and a third in May of the same year. No definite conclusion as to the exact nature of the "fits" could be drawn from the mother's description of them, but it is probable they were epileptiform and due to the condition of the heart.

There was a very noticeable improvement after the digestive organs had been attended to by careful dieting and grey powder with rhubarb, followed by syrupus ferri iodidi.

A review of the case led to the conclusion that whatever other congenital defect of the heart was present, patency of the ductus arteriosus also existed.

(*Exhibited May the 3rd*, 1907.)

Discussion.

Dr. F. W. Higgs did not agree with Dr. Chapman's diagnosis. He thought it most likely that it was a case of congenital aortic

stenosis, with regurgitation following on the stenotic condition. The murmurs were heard loudest over mid-sternum, being a to-and-fro murmur of the high-pitched "sawing" character which was typical of the double murmur of acquired aortic disease. There was definite dilatation and hypertrophy of the left ventricle which supported this view, and the systolic part of the murmur was heard very clearly in the neck, this being also characteristic of a murmur formed at the aortic valve. Dr. Chapman told him the child had had very few symptoms, which seemed to support Dr. Higgs' view of the case. A moderate degree of aortic stenosis or regurgitation might exist for a long time without symptoms. He had only seen one case of congenital aortic stenosis verified post-mortem. In that case there was no regurgitation. A loud systolic murmur was heard all over the front and back of the chest. The child had had no symptoms, except for two not very severe attacks of bronchitis, for which the patient was treated in hospital. The cardiac disease was not suspected until the chest was examined. The bronchitis cleared up, and the patient was sent out. Some months later, without further symptoms in the interval, the boy was brought into hospital dead, having died suddenly while running in the street just after having had a heavy meal.

Dr. C. O. Hawthorne thought the case belonged to a group, the individual members of which were very difficult to disentangle with anything like diagnostic confidence. The complete absence of symptoms was very striking, but he would hesitate to base upon that anything like a confident view that there was not disease at the pulmonary orifice. A child might have distinct evidence of congenital pulmonary disease, and yet, for long, remain completely free from symptoms. He would hesitate to say it was not a case of patent ductus arteriosus, not because he had a competitive diagnosis to summit, but because many cases of congenital cardiac disease were proved post-mortem to be something different from what was anticipated. The curious humming noise was quite distinct from the murmur of the valvular flaw, and was possibly venous in origin. Now and then one came across a murmur over the upper chest having this origin.

Dr. L. A. Clutterbuck understood that one of Dr. Chapman's reasons for considering it persistent ductus arteriosus was the existence of a very definite sound on the right side of the chest, rather under the clavicle, and more or less limited to that position. He, however, thought that was not really the position where one would expect to hear the blood flow through the ductus arteriosus, which would extend between the left pulmonary artery and the aorta. Moreover, the murmur seemed too loud to be formed in what would be such a small vessel.

81. A CASE OF MULTIPLE FRACTURES.

By HUGH LETT, Ch.B.

The patient was a full-term female child, aged 7 months, and labour had been easy. The condition was noticed at birth, when all the bones were bent, with creases in the skin opposite the curves. There was evidence of old fracture in all the bones of the arms and legs, with some thickening due to callus; this was confirmed by X-ray examination. The bones had all united, but at an angle, forming curves resembling those due to rickets. There was no fracture of the clavicles, scapulæ, or ribs. Hydrocephalus was present in mild degree. There was also evidence of rickets. The family history was excellent, longevity being marked. No history of fractures in any branch of the family, no history of syphilis. The mother had been in delicate health for eighteen months before the child was born, and had two bad falls during the seventh month of her pregnancy. There was one child living, aged 4½ years; he was strong and healthy, but two other children died when a year old from diarrhœa and vomiting. (*Exhibited May the 3rd*, 1907.)

82. A CASE OF MONOPLEGIA PRESUMABLY DUE TO EMBOLISM OF A CORTICAL ARTERY.

By F. W. HIGGS, M.B.

The exhibit was a case of monoplegia, presumably due to embolism of a cortical artery, in a girl, aged 8 years, suffering from mitral regurgitation. The patient was in hospital a year ago with chorea and rheumatism. She had a systolic mitral murmur on admission, but

as there was no previous history of rheumatic disease, the murmur was probably due to an acute endocarditis. Seven months ago she contracted scarlet fever and had jaundice during convalescence. She remained well until five weeks ago, when, having caught a cold, she went to bed with a slight headache. She awoke next morning at the usual time, with loss of power in the left arm; no other paralysis was noted. When first seen, three days later, there was paralysis in all the muscles of the left upper limb, with the exception that the fingers could be flexed slightly. This power of flexion of the fingers had probably returned during the preceding three days. The cardiac signs were those of mitral reflux without evidence of stenosis. A week later flexion of the fingers was performed better, and the wrist could also be flexed somewhat, there being no voluntary extensor movements. Since then, some power had returned in the supra-spinatus and flexors of elbow, and later slight power of extension of the fingers. There had been no sensory disturbance. The tendon reflexes were not obtained. The interest of the case was that the physical signs suggested that the whole cortical area for the upper extremity was supplied by one artery, which supplied no other part, and that the movements which had returned had their centres round the circumference of this cortical area. (*Exhibited May the 3rd*, 1907.)

Discussion.

The Chairman (**Dr. T. R. Whipham**) asked whether there was any evidence of embolism elsewhere, because, if so, that would perhaps serve to clinch the diagnosis.

Dr. C. O. Hawthorne thought the diagnosis of embolism almost inevitable, even though one recognised the case as a most unusual one. He could not recall an exactly parallel case, and asked whether Dr. Higgs had made any extended reference to literature to see if similar cases had been recorded?

Dr. Edmund Cautley thought the question whether there was any other evidence of embolism was of importance. He was a little sceptical about embolism producing such a definite limb lesion with a rapid return of power afterwards. If there was a

local embolism blocking the artery he would expect that there would practically be no return of power at all. His view would rather be that the paralysis was due to local thrombosis. If there had been thrombosis there would probably be a less complete destruction of function of the nerve-centre, and power would return more readily in the flexors of the arm than in the extensors.

Dr. F. W. Higgs, in reply, said there was no evidence of embolism anywhere else. He had not yet had time to go into the literature of the subject, but in the few text-books on general and children's diseases which he had consulted he had not gained any definite information on the subject. He did not think it was possible to be certain whether there was primary thrombosis or embolism. There was no condition present likely to cause thrombosis, except anæmia, which was certainly marked; and the fact that the patient had had acute rheumatic endocarditis a year ago was presumptive evidence that, with the existing mitral disease, there were fairly soft vegetations on the mitral valve, one of which might have become detached and have formed an embolus.

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83. A CASE OF ERYTHEMA IRIS.

By GEORGE PERNET.

The patient was a boy, aged 12 years, in whom the disease began a month previously. When first seen, two weeks after the rash broke out, the face presented a number of $\frac{1}{4}$th inch to shilling-sized erythema iris lesions scattered about the cheeks, but predominating on the left side. The tongue was furred, but the bowels regular. He had been on a mixture containing gentian and sulphate of magnesium for a fortnight and now the tongue was clean. As to the iris lesions, they had now lost their discrete and sharply-defined appearance, having flattened and coalesced, giving a general reddened aspect to the cheeks, with slightly raised semicircles here and there at the borders, remains of the old circular lesions. The case was interesting in that the face was the only part involved.

(*Exhibited May the 3rd*, 1907.)

84. A CASE OF CEREBRAL TUMOUR AFTER OPERATION.*

By PORTER PARKINSON, M.D.

Craniotomy and incision of the dura mater had been performed with the hope of relieving symptoms. The result was that the headache, vomiting, and convulsions had been completely relieved, the sight had greatly improved, and the optic neuritis, previously very intense, had practically disappeared, while the weakness of the face and arm was less than before operation. The tumour was probably a glioma situated beneath the motor cortex.

(*Exhibited May the 3rd,* 1907.)

85. HEREDITARY MULTIPLE EXOSTOSES.

By DUNCAN C. L. FITZWILLIAMS, M.B.

Two boys, aged 10 and 12 years, and their mother were exhibited.

A boy, aged 10 years, was admitted in April into the Hospital for Sick Children, Great Ormond Street, under Mr. Kellock, for the removal of two rapidly-growing exostoses. One was attached to the seventh rib and was about the size of a large walnut, the other was attached to the inner aspect of the head of the right tibia. In addition to these two tumours, about thirty similar growths of small size were counted on various parts of the body. These exostoses—hard, painless nodes—were situated for the most part in the region of the epiphysial lines. With the exception of the two already removed, none were now

* For previous history see exhibit No. 57.—(Ed.)

increasing in size. The long bones, ribs, scapulæ, and clavicles were nearly all affected. Growths were present on the backs of the phalanges of the hands, and the middle digit of the right hand was curved inwards from the unequal growth of bone. The head, vertebræ, and pelvis were not apparently affected. The child was the youngest of a family of seven children, four boys and three girls, the eldest being 27 years old. The mother and all the children showed similar growths.

The brother, in addition to many growths similar to those already described, had exostoses on the middle of the dorsum of all the proximal phalanges of the right hand. The older children were more affected than the younger ones. None of the children had suffered the slightest inconvenience from the affection, and the tumours, with the exception of the two already removed, had not increased in size after the first few years of life.

The mother had suckled all her children till they were twelve to fourteen months old. The growths were first noticed when the children began to run about and their limbs took shape and lost the fat of babyhood. There were no signs of rickets about the two children shown, and the mother stated that they began to have teeth after the age of six months. In favour of the view that the growths were congenital and not simply due to rickets, there was, firstly, the fact that the mother had similar nodules on her bones; secondly, the excessive bone formation at the site of muscular attachments at some distance from the epiphysial lines; thirdly, the presence of growths well up on the shafts of the phalanges, a common enough site to meet with cartilaginous tumours, but rare for those consisting of bone. Judging from the size of some of those felt, they must have grown considerably in the early years of life, for they could not, in their present state, have escaped detection during the first twelve months.

They seemed to be the result of excessive bone formation and analogous to the excessive formation of other special tissues met with in young children, such as nævi

and papillomata of all kinds. Pepper* mentions a similar case in a boy, aged 10 years, whose parents were both affected in the same way.

(*Exhibited May the 3rd*, 1907.)

Discussion.

The Chairman (**Dr. T. R. Whipham**) thought it would be interesting to know whether these tumours had increased in size as the patients became older.

Mr. Russell Howard asked whether the tumours were noticed at birth, as these exostoses were supposed to be, in some cases, connected with rickets.

Dr. Edmund Cautley referred to the fact that the first volume of the Society's 'Reports' contained a description by him of similar cases. Three children in a family of six were affected, though the parents and other relations were free. In two of the children the exostoses were first noted in the second year of life. Later on, a seventh child came under observation at the age of nine months for similar exostoses.

Mr. Francis Jaffrey was interested in the case, as he had recently seen a patient who had been under his care for about eight years suffering from exostoses which had considerably increased in size. Latterly their pressure on the spinal cord caused partial paralysis, especially below the knee. Though laminectomy was done there was no improvement and the patient got progressively worse.

Mr. D. C. L. Fitzwilliams, in reply, said the tumours grew only during childhood, and did not attain any great size. The elder boy had about a dozen, but they were mostly small. Two of the tumours were removed, one as large as a walnut, and the other half that size. The children were all fat, and the mother did not notice anything until they ran about and thus got thinner. The growing tumours were covered with a layer of cartilage, but the stationary ones, the little, hard, pea-like bodies were completely ossified, and were very unlikely to grow any more.

* 'Elements of Surgical Pathology,' Cassel and Co., 1883, p. 425.

86. A CASE OF SUBACUTE ARTHRITIS.

By F. W. HIGGS, M.B.

A BOY, aged 3 years, while convalescing from whooping-cough about two years ago, developed pains in certain joints, with swelling. The lesions had persisted in a subacute form, and at present there was peri-arthritis of the joints of the wrists, ankles, knees, and cervical vertebræ. Spleen and glands were not enlarged. The disease was evidently of toxæmic origin, either secondary to a very septic mouth or as a complication of pertussis, similar to that occurring in the gonococcal, pneumococcal and influenzal toxæmias. (*Exhibited May the 3rd*, 1907.)

Discussion.

The Chairman (**Dr. T. R. Whipham**) inquired whether there was any glandular enlargement or any enlargement of the spleen. A certain class of case had been described by Still in which there were joint changes and lymphatic enlargements. It would be interesting to have skiagrams of the case, which was apparently similar to one which he showed before the Society at the beginning of the present session, in which there were numerous enlargements around the joints of the fingers, wrists, and knees. In that case there was no glandular enlargement, nor increase in the size of the spleen. The skiagrams showed no changes in the bones, nor in the joints. Apparently the case was one, as Dr. Higgs said, of peri-arthritis. His own case improved considerably under electrical treatment, but unfortunately, owing to the hospital having been shut, he did not know how it was progressing at the present time. He hoped to bring the patient forward at a future meeting.

Dr. Edmund Cautley thought the case was probably one of the toxic form of peri-arthritis, not true osteo-arthritis. One seldom saw at such an early age a true osteo-arthritis. In that disease the metacarpo-phalangeal joints were often affected, whereas in the present case they were not at all involved. The child was very anæmic, and the anæmia was, in conjunction with the prolonged joint affection, associated with decayed teeth. This supported the view that there was some chronic form of

toxæmia. He did not think it at all analogous to the cases described by Still, which were simply osteo-arthritis with enlargement of the glands and a palpable spleen. He did not attach much diagnostic importance to glandular enlargement in children in any condition of toxæmia, as the glands became enlarged on the slightest provocation.

Dr. Porter Parkinson was interested in the sort of case described, as he had been specially studying, for some years, the gonorrhœal form of toxæmic affection of joints. He had concluded that there were a large number of cases, variously called toxæmic arthritis and osteo-arthritis, which really originated in the one condition of a toxæmic affection. He believed that the majority of cases of osteo-arthritis were cases of chronic toxæmia. He found that the same organism could produce peri-arthritis and, at other times, arthritis. The gonorrhœal was a very common type, and cases were also seen in which there was practically no peri-arthritic trouble, the disease being confined almost entirely to the inside of the synovial membrane. If one organism could produce those different types of results in different cases, he thought it very likely that the large masses of organisms concerned in different cases could produce very different affections of the joints. In the course of years he thought it might be found that the disease was due to various organisms. An instance of that was seen where the teeth were decayed. No doubt there were many which caused gastro-intestinal affections. It was a common experience to find people suffering from flying joint pains, and sometimes joint swellings, which were much improved by intestinal antiseptics, and by giving a dose of calomel. He thought many of the cases arose from an intoxication starting in the intestinal canal, and that in time they would be classified under the head of chronic toxæmic arthritis.

Dr. F. W. Higgs, in reply, regretted that he had no skiagrams. There was no enlargement of the lymphatic glands or the spleen.

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87. A CASE OF ERB'S PARALYSIS OF THE RIGHT ARM.

By P. LOCKHART MUMMERY, B.C.

The child was a boy, aged 6 months. There was a history of difficult labour and delivery by version and traction upon the right arm.

The child is well nourished and healthy. The right arm is held in a semi-flexed position with the hand rotated-in and clenched. He cannot move the arm or grasp anything with the hand. The right shoulder-joint is stiff and partly immobolised by adhesions, so that it is not possible to extend the arm straight out from the side of the body without the exercise of considerable force and causing the child pain.

There are no signs of adhesions in any of the other joints. Tested electrically all the arm muscles appear to be more or less paralysed and a response to electrical stimulation could only be obtained in the flexor sublimis digitorum.

This tendency to the formation of adhesions in the shoulder-joint in cases of Erb's or birth paralysis is commonly present. Treatment is being directed to moving all the joints freely after breaking down the adhesions in the shoulder under anæsthesia, combined with massage and electricity to the affected muscles to prevent degeneration.

Improvement is expected.

(*Exhibited May the 3rd*, 1907.)

88. A CASE OF MORBUS CORDIS.

By T. R. WHIPHAM, M.D.

The patient is a girl, aged 11 years, who is said to have been always delicate. Her father died from pulmonary hæmorrhage and her mother from paralysis. Two sisters are healthy.

Five years ago she had an attack of epistaxis, and for the last three years has had similar attacks at intervals of about three weeks. Previous to my seeing her there was no history of rheumatism or chorea.

She was brought to the Evelina Hospital in July last, having had three attacks of epistaxis during the previous four days, the last of which had been profuse. She was admitted on this account, and it was not till she was in bed that the cardiac murmur was discovered. The heart was considerably enlarged. A systolic murmur was audible all over the præcordium, but on changing from the recumbent to the sitting position it was most intense in the aortic area, being louder and rougher there than elsewhere. The thrill of the cardiac beat was also best marked in this region. The first sound at the apex was loud, and the second was either inaudible or replaced by a slight "whiffing" diastolic murmur. At the base a slight second sound was present. The pulse was regular and rather full.

During the last two or three months the child has been laid up with a severe attack of rheumatic fever accompanied by profuse epistaxis. She is a well-grown girl, presenting no marked signs of cyanosis. The cheeks, it is true, show a certain purplish flush, but this is said to be a family characteristic and is to be seen in her elder sister. There is no clubbing of the fingers. The heart's apex beat is in the sixth space, a little outside the nipple line, and is readily visible. The impulse is wavy and rather forcible. A thrill is palpable at the apex and also at the base, especially in the second interspace just to the right of the sternum. The cardiac dulness extends well beyond the sternum on the right. When I examined the heart in the middle of the day, the patient being in bed, there was at the apex a loud first sound, followed by a well-marked systolic murmur, but no second sound, its place being taken by a more or less constant diastolic brut of no great intensity. In the Society's room this diastolic murmur had changed to a presystolic and the cardiac cycle ended with the systolic murmur, which is heard all over the cardiac area and round to the back. At the base the systolic murmur is louder and rougher in character and culminates in the second interspace to the

right of the sternum, a characteristic which was more marked a short time ago when the compensation was inadequate. The systolic bruit is also heard over the vessels in the neck, and markedly in the episternal notch. A curious feature about the case is that the second sound is everywhere almost entirely absent. It cannot be heard in the aortic area or at the apex, and in the pulmonary region it can only occasionally be detected as a faint click. The liver is not enlarged, and there is no œdema. The pulse is regular and of a fair volume. With regard to the blood it is interesting to note that the patient has polycythæmia, the greatest number of red corpuscles that has been found being 7,800,000 per c.mm. soon after she came under observation. She now has 5,670,000 red cells and 66 per cent. hæmoglobin in spite of her recent severe illness and hæmorrhage.

As to the diagnosis of the heart lesion in this case, I am inclined to think that there is mitral stenosis, and considering the intensity of the thrill and of the systolic murmur over the aortic area, and the absence of the second sound, that there is possibly a congenital lesion as well, perhaps a narrowing or coarctation of the aorta.

(*Exhibited May the 3rd,* 1907.)

Discussion.

Dr. Porter Parkinson said he examined the case with considerable difficulty, owing to the congested state of the room; it was difficult to hear the murmurs. He hoped there might be another room available for the purpose. One thing alluded to had particularly struck him: was the first sound at the apex, of that character, met with in mitral stenosis? There was no doubt about mitral regurgitation. He thought the aortic condition might also be accounted for by the acute rheumatism, provided it was not there before, and the disappearance of the murmur could be likewise acounted for. If there were vegetations on the aortic valve which in the course of time had shrunk up, they might have produced a thrill at one time, which might now have permanently disappeared, and that might account for the whole condition. It would be a curious result of acute rheumatism. Was it not really a congenital defect? There

was no more enlargement of the right side of the heart than would be accounted for by the mitral disease, and there was considerable enlargement of the left side.

Dr. Edmund Cautley said he did not see the case, but it was very interesting, first because of the polycythæmia. The Chairman had suggested that the high colour of the child was a family peculiarity, and he suggested it should be ascertained whether the other members of the family had polycythæmia. Apart from that, the blood condition was in favour of some congenital lesion of the heart. He also asked whether the character of the pulse suggested any aortic stenosis. From the remarks of the author he was opposed to the idea that there was aortic stenosis. He would have thought that the association of the polycythæmia, the hæmoptysis, and the peculiar murmur was in favour of some congenital lesion, possibly some pulmonary stenosis.

The Chairman (**Dr. T. R. Whipham**), in reply, said there was no history of acute rheumatism or any such illness prior to his first seeing the child. The murmur was present at that time. He had seen the sister, and she had no cardiac lesion: he did not examine her blood. The pulse was not characteristic; it was of fair volume, by no means slow, with a long-drawn-out wave, which one would expect in aortic stenosis. He did not think it was possible it could be a pulmonary lesion. The greatest intensity of the murmur was, he thought, to the right of the sternum. The child was not cyanosed, and there was no clubbing or thickening of the fingers.

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89. A CASE OF UPPER DORSAL SPINAL DISEASE BENEFITED BY PROLONGED EXTENSION ON THE "SLIDING MATTRESS" AND BY EXERCISES ON THE "ALL-FOURS EXERCISER."

By WILLIAM EWART, M.D.

Thomas R—, aged 6 years, stated to have suffered from his spine for the last two and a half years, was admitted into St. George's Hospital, on July the 7th, 1906, suffering from severe bronchial catarrh. The condition of the spine was

as follows: Great prominence of seventh cervical spine and exaggeration of the cervico-dorsal curve, with compensatory lower dorsal curve in the antero-posterior diameter. Definite pain and rigidity on bending the head. No tenderness locally or on "jarring." The progress of the chest affection was slow. Bacilli were not found in the expectoration.

On August the 13th a broken-down gland at the left angle of the jaw was incised. No treatment was directed to the spine.

On August the 18th he went to convalesce at Warlingham, and gained there sufficient strength to run about. He was re-admitted on February the 4th, 1907, because of inability to walk any distance, or almost to stand. Spinal pain in the angular curvature had ushered in these symptoms six weeks before re-admission. He was submitted to extension on the "sliding mattress," with excellent results. The child is now able to stand and to step, but is still feeble. The abdomen remains large and relaxed, and there is marked hypotonia of the knees and joints of the toes. The "sliding mattress" is, as suggested by the name, arranged on a perfectly smooth inclined plane made of wood, the child's head being held by the suspension bandage, which is attached to a fixed point behind the bed. Traction is kept up on the spine by the moderate drag of the mattress and of the body. Considerable relief was experienced from the first, and the child has never complained of any discomfort from the treatment, which is still pursued, except during the periods of exercise. The "exerciser" is a wheeled support or saddle upon which the patient lies on his abdomen and lower thoracic region. The height of the saddle can be regulated so that the child can propel and guide the machine with his hands and feet on the floor. Both these appliances are devised for the purpose of giving the advantages aimed at without any associated strain. The stretching of the spine is, as in the method of suspension, effected

automatically by the weight of the body itself; but owing to its mitigation by the inclined plane it can be kept up indefinitely. On a similar principle the "exerciser" takes off the weight of the body from the legs, and enables their muscles as well as those of the arms to be freely used without any undue effort.

(*Exhibited May the 3rd,* 1907.)

90. THE WIGHTMAN LECTURE: PNEUMONIA IN CHILDREN.

By FREDERICK TAYLOR, M.D.

When some months ago I received the invitation to deliver the Wightman Lecture before The Society for the Study of Disease in Children, I felt deeply the honour conferred upon me, and accepted the duty with a light heart, thinking that I should find no insuperable difficulty in selecting a subject which would prove interesting to my audience, and would, at least, do credit to the Society under whose auspices it was being discussed. But I then hardly realised the task which was before me, and looking back upon the circumstances in connection with which this Lectureship was generously founded by Mr. Charles Wightman, I feel all the more acutely that I may be very far from adequately fulfilling the requirements, or even approaching the ideal the founder had in his mind. You, Sir,* as the first Wightman lecturer, informed your audience that this Lectureship was founded as a permanent memorial to a dear son carried off by disease at the early age of seven, and in the hope or trust "that future scientific observations may lower the mortality of other diseases to which children are liable, and that this lecture may be the means of establishing or of diffusing such knowledge."

When I think over the subject which I have chosen,

* Mr. R. Clement Lucas occupied the chair.—(Ed.)

I may regard it as one which comes well within the scope of the founder's intentions; but when I review the results of my treatment of it, and try to estimate how far it realises the conceptions of the founder, I feel that I must beg him, on the one hand, and you, the Society to whom he has confided this trust, on the other, to look very leniently upon my efforts, since, in their results, they lag very far behind what I had hoped and believed they might be.

The subject of "Pneumonia in Children," is one to which no one can be indifferent; it is a disease to which children of all ages are liable, of which hundreds of children die annually, and in the progress of which, one must confess, that the physician has not too great a share, and would willingly have a greater. But whether it has any importance at the present time, or can usefully be made the subject of the present address, must surely depend upon the value of any new facts which can be brought forward in connection with its ætiology, diagnosis or treatment; or any new views or hypotheses, sufficiently well based, which may lead up to improvements in either its cure or prevention.

There is one curious fact which might long ago have prevented me from selecting this subject, and that is, that in the six published volumes of the 'Reports' of this Society there is scarcely a paper alluding to the subject of pneumonia, certainly no article which expressly deals primarily with any phase of the disease. I think this fact is probably to be explained by the constitution and usages of the Society, in which the actual exhibition and direct study and observation of the cases forms an essential feature of the Society's work; and hence more attention is likely to be paid to cases which can be transferred from the hospital to the meeting-room than to those which, like pneumonia, are acute in their course, often dangerous to the sufferers, and hence not suitable for examination and discussion before the Society.

And I am sadly afraid that even now, when through

the medium of this lecture, if it is admitted to your 'Reports,' I shall have introduced the subject, it will consist of very little original matter of my own, but mainly of a review or consideration of the work which has been brought before other Societies, or published in other ways within recent years.

Relative frequency of croupous pneumonia and broncho-pneumonia.—One of the chief questions which has been debated in modern times has been the relative frequency of croupous and broncho-pneumonia, or of lobar and lobular pneumonia in children; and comparatively recently this has been the subject of more or less elaborate papers.

As one can readily understand, the separation of lobar from lobular pneumonia has been a development of comparatively modern time, assisted no doubt by improvements in auscultation and the greater elaboration of histology. In the older writers there is rarely any description of lobular pneumonia or broncho-pneumonia apart from inflammation of the lung in general.

Dr. Charles West, in his classical lectures on the "Diseases of Children," first published in the 'Medical Gazette' for 1847, states in so many words that the name "lobular pneumonia" was first given to a condition which was not inflammatory at all, that condition which is so frequently associated with broncho-pneumonia, namely, lobular collapse; and that this fallacy and confusion prevailed until it occurred to inflate the affected portion of the lung, when it was demonstrable that the solid portions of lung were deprived of air by simple collapse, and not by repletion with inflammatory products.

He admits, however, almost grudgingly it would seem, that such a thing as lobular pneumonia does exist. For instance, to quote from the lectures in their fifth edition published 1865, he says: "As a result of bronchitis it sometimes happens that the lung is found in a condition which may justly be called lobular pneumonia." He also states that a "pneumonia, at first lobular, may at length coalesce." Later on he refers to broncho-pneumonia as a

case in which bronchitis has extended to the lung—a case of mixed character.

But though not explicitly describing two forms as clinically distinct he sufficiently recognises that they may be named as separate species when he discusses their relative frequency. For instance, when proceeding to describe lobar pneumonia he says that the cases previously alluded to as constituting true lobular pneumonia are "somewhat less rare than in the adult, still of very infrequent occurrence." That such cases were ever thought to be frequent he attributes to a confusion with lobular collapse; and this exaggerated frequency of lobular pneumonia led to an underrating of the importance of lobar pneumonia, which, he says, is often in early life a primary as well as a secondary affection.

Here then, so long ago as fifty or even sixty years, we see that the question of the relative frequency of the two forms of pneumonia, which even in the last year or two has been thought worthy of further investigation, was answered in different senses; but the subject then appears to have been partly complicated by the failure to eliminate entirely, as it appears easy to do now, the condition of lobular collapse.

It is this question of the relative frequency of lobar pneumonia and lobular pneumonia which has chiefly exercised recent observers, who have quite properly made the attempt to represent numerically the proportionate share which these two forms have in the inflammatory lesions of the lung in young people. And it is quite obvious, in spite of the opinions expressed years ago, that the writers have felt the necessity of driving home the fact of the frequency of croupous pneumonia, as if in antagonism to some expression of opinion or general feeling that this form of disease rarely occurred in young children or infants. If such a general feeling has existed it has no doubt arisen as a result of one or two defects in the human organisation (mental and physical)—namely, the difficulty which so many of us have of carrying in

the mind more than the simplest contrasts, or anything but unqualified statements. And so, having recognised that broncho-pneumonia is more common in infancy and old age and croupous pneumonia more common in the intervening period, we are easily led to think, or talk as if we thought, that neither of these diseases ever occurred at periods other than those in which it is simply "more frequent."

Such a process, of course, could not be operative in the case of those who make accurate notes of all the cases which come under their care, or carefully criticise them with a view to scientific differentiation. Unfortunately there are many for whom such an ideal is incapable of complete realisation. But quite apart from this there are two reasons for difficulties or discrepancies in opinion with regard to such a point, and these are:

(1) The high probability that results are different in different places or in different groups of cases.

(2) The fact that they are only different forms of the same disease, not different diseases, and that therefore, however desirable it may be to conceive of them as essentially distinct and easily discriminable, the facts may be that they are more easily confounded together than some would like to believe.

The statements made are of two kinds:

(1) The incidence of croupous pneumonia in infancy as contrasted with pneumonia in older children and adults.

(2) The incidence of pneumonia in infancy as contrasted with that of broncho-pneumonia at the same period.

Among English writers who have dealt with this subject in the last few years I may mention Dr. Clive Rivière. He states that the greatest incidence is in the second year of life, and out of 155 cases finds 20 occurring in the first year, 46 in the second, 38 in the third, 27 in the fourth, 18 in the fifth, 5 in the ninth, and 1 in the twelfth.

Dr. Vere Pearson makes the statement that croupous pneumonia is more common in infancy than in any succeeding age; but apparently from what follows this should

be qualified, and stand as more common than in any succeeding equal period of life. But he quotes the opinions of others which are not quite in accordance with this. Curiously, one of these is Dr. Clive Rivière, who said that it is certainly uncommon in the first two years of life. But this was in 1902, in a paper antecedent to that above quoted. The others are: Holt, who found it more common in the fifth year; Morrill, in Keating's work, the fourth to the seventh years; Henoch, in the sixth to the twelfth; and F. H. Hawkins in the twentieth to the thirtieth. This last period is, of course, outside the period comprised in pediatrics.

Dr. Bertram Abrahams is another who is deeply impressed with the ignorance of the profession generally as to the frequency of croupous pneumonia in children, and he says in the 'British Journal of Children's Diseases,' April, 1904: "Among the diseases of which the frequent occurrence in children is insufficiently recognised is lobar pneumonia, which is quite a common affection from the age of two upwards." That is to say, though he insists on its frequency in children, and feels that he is preaching a gospel which should be widely diffused, his facts have not been quite of the same order as those of Dr. Rivière; he does not predicate anything of a lobar pneumonia in the first two years of life, and his statement can only be construed to mean that it is much less frequent than in the third, fourth, fifth, and succeeding years.

Passing from London to Manchester, we find that Dr. Ashby's returns, as given in the latest edition of 'Diseases of Children,' by Dr. Ashby and Mr. Wright, are more in accordance with those of the last writer and less in agreement with those I had previously mentioned. Out of 708 cases of lobar pneumonia occurring in fifteen years, 29 occurred in the first two years, which we may call for purposes of comparison 14·5 for each year's period; 213 in the next three years of life, or 71 for each annual period; 338 in the next five years, or 67 for each annual period, and 128 in the years ten to fourteen, or 32 for each annual period.

Crossing the Atlantic to Boston, U.S.A., we find the results of some observations made in that town at the Infants' Hospital, published by Dr. John Lovett Morse in the 'Archives of Pediatrics,' 1904, p. 641. The profession in America seems to have been as wrong-headed as that in England with regard to this vexed question of the infantile incidence of croupous pneumonia. He begins: "This study was undertaken because of my feeling that many of the commonly-accepted views, not only as to the frequency of lobar pneumonia in infancy, but also as to its onset, course, and prognosis, were erroneous, and not justified by the facts."

In nine years, out of 1900 cases admitted to the Infants' Hospital (and this appears to be a separate institution from the Children's Hospital), there were 118 cases of lobar pneumonia, which were almost equally divided between the first and second years of life, namely, 58 in the first year, and 60 in the second.

No comparison is here possible either with pneumonia in older years in Boston, or with the relation of pneumonia to other diseases in English hospital experience; but he notes that only sixty cases of broncho-pneumonia were admitted in the same period, which, even if, as was the fact, cases secondary to measles and whooping-cough were excluded, is, perhaps, explained by the further statement that only the more severe cases are brought for admission.

I have tried to get some evidence on this point from sources immediately available to me, namely, from the clinical and post-mortem records of Guy's Hospital. I regret to say that I have not been able to push my inquiries as far as I should have liked. To begin with, I have taken the clinical records of our clinical ward for one year. This is a ward consisting of two divisions, male and female; the male division has sixteen beds, the female sixteen beds and four children's cots. The ward is intended for cases selected either on account of their gravity or their educational value, or other interest. As a fact, though there are only four cots a large number

of children are constant inhabitants. In the year 1906 sixty-two children of twelve years of age and under were treated for inflammation of the lungs. Of these thirty-five were called broncho-pneumonia and twenty-eight lobar pneumonia.

Of the twenty-eight lobar pneumonias only one was so young as two years old, and four were three years old; the age of five years was represented by seven cases, of six years by three cases, and seven years by five cases. The point of importance is that no case of croupous or lobar pneumonia was recognised to occur in the first two years of life. The average age of the twenty-eight cases was 6·07.

Of the thirty-five cases of broncho-pneumonia the age of one case is not stated. Of the rest sixteen or nearly half occurred in the first two years of life, eight in the third year, five in the fourth, and the other few are almost equally divided between succeeding years. The average age of these cases was $2\frac{1}{4}$th (2·25).

Of these cases twenty-two were fatal, and a post-mortem is recorded in thirteen. I have looked carefully through the notes of the remaining cases, and in not more than two of the cases does it seem reasonable to doubt the diagnosis of broncho-pneumonia, or to suppose that a croupous pneumonia must have been there instead.

Evidence from post-mortem records alone, that is, not collated with the clinical records of the wards for the same period, cannot give all the information one wants in reference to the incidence of the particular diseases or forms of disease. If a disease is never fatal and always recovers it will be rarely met with in the post-mortem room; if a disease is often fatal it will, of course, be frequently seen below. Still, it is not contended that lobar pneumonia is never fatal, only that its prognosis is much better than that of broncho-pneumonia.

The post-mortem records of Guy's Hospital for 1905 concern 625 cases; of these 109 were cases of broncho-pneumonia and 50 cases of lobar pneumonia. In addition were fourteen cases of septic pneumonia. There is very

little overlapping: two cases had both broncho-pneumonia and lobar pneumonia. And further, one of the septic pneumonias had been included under the lobar pneumonias, and one among the broncho-pneumonias.

But to concern ourselves with the children I find that there were ninety-four cases of broncho-pneumonia under twelve years of age, with the following distribution:

Under one year of age .	28 or 29·8	per cent.
In the second year . .	34 or 36·1	„
In the third year . .	12 or 12·7	„
In the fourth year . .	11 or 11·7	„

In the fifth, seventh, and tenth years two each, and in the twelfth year one. This supports the statement as to the great infrequency of broncho-pneumonia after the age of three. Amongst the fifty lobar pneumonias only seven were children. One was in the first year, two in the second, one in the third, the others in the sixth, ninth, and twelfth. The point of interest in this connection is that one of these children, aged 2¼th years, had lobar pneumonia or broncho-pneumonia in the same lung; and another, aged 1 year, had lobar pneumonia of the right lung and broncho-pneumonia in the left.

These records suggest that lobar pneumonia is not common in infants; and they show that, at any rate in this institution, the lobar pneumonia of infants, if frequent, was even much less fatal than it was in the hospitals in which some others have observed their cases.

Before attempting to discuss the reasons for discrepancies in the results given above, I will say a few words (1) on the relative incidence of broncho-pneumonia and lobar pneumonia in young children; (2) on their relative mortality. This point has been chiefly discussed in relation to children under two years of age. Dr. Rivière gives the proportion of lobar pneumonia to broncho-pneumonia as 1 to 3, *i. e.* 65 cases of the former to 195 of the latter. Dr. Vere Pearson quotes Holt to the same effect—that is, croupous pneumonia 25 per cent., and broncho-pneumonia, 75 per cent. His own figures

from the East London Hospital for Children at Shadwell were 121 croupous pneumonia to 172 broncho-pneumonia, or 41·3 per cent. to 58·7 per cent.

The Guy's Hospital records differ largely by the entire absence of lobar pneumonia from the children of this tender age at a time when sixteen cases of broncho-pneumonia were dealt with. These figures are small and the discrepancy may possibly be explained, at least partly, when we consider that only five cases of lobar pneumonia are wanted to bring the proportion into line with the observations of others.

Dr. Morse's statistics are, however, as extreme in the other direction, and in larger figures, since the cases seem to have been collected from the records of nine years. While 118 cases of lobar pneumonia were being observed only 60 cases of broncho-pneumonia were treated under two years of age, thus reversing the relations and making the lobar pneumonia 66·3 per cent., broncho-pneumonia 33·7 per cent. But broncho-pneumonia in connection with whooping-cough and measles was not included, so that the total cases from this cause would naturally be much less than in some other returns. For instance, in the Guy's post-mortem records whooping-cough figures rather largely.

Mortality of croupous pneumonia in children.—I come now to the mortality of croupous pneumonia in children, and here discrepancies in observations are, unfortunately, also present. Dr. Clive Rivière found a mortality of 25 per cent. for infants in the first year of life, and 15·4 per cent. for those in the first two years of life, as against 2·3 per cent. for those over this age.

Ashby and Wright give 27 per cent. for the mortality in children under two years of age, which is, of course, higher still; while their percentage mortality was 10 per cent. between two and five and 2·3 per cent. between five and ten. Dr. Morse's result is very similar, namely, a mortality of 26·31 per cent. for the first two years of life, or for the two years taken separately, 36 per cent. in the first year, 19 per cent. in the second.

"These figures," he says, "give a very different picture of the severity of pneumonia in early life from that given in most text-books. They show that although pneumonia may be a comparatively mild disease in childhood, it is a severe and very fatal disease in infancy, the fatality varying inversely with the age of the infant."

Some of this text-book mortality is quoted by Gillet (in 'Gazette des Hôpitaux,' June the 24th, 1903, No. 74). According to him Rilliet and Barthez had 212 cases in children with two deaths; Gassicort, 70 cases with one death; Comby, 150 cases with one death; Haushalter, 100 cases with one death; Hellestrom, 30 cases, and Barber, 17 cases with no deaths; a total of 579 cases with five deaths, or less than 1 per cent. In what proportion of these cases the patients were under two years of age is not here stated. Schlesinger stated it to be his impression that 5 per cent. of children's lobar pneumonia cases were fatal, and American authors in general, previous to this date (1903) stated 4 per cent.

At Guy's Hospital, in the year 1905, the post-mortem records show only seven cases of lobar pneumonia under 12 years of age. Of those three were six years, three two years of age: one of these three was the case with lobar pneumonia of one lung, and broncho-pneumonia of the other.

Explanation of discrepancies.—Returning again to discrepancies in the various figures and the explanations, I think these are some of the points to be considered:

Even though large numbers of cases may be collected, they are generally from a limited source. The returns of a single hospital in one locality of a large town do not represent all the facts with regard to the given disease, or with regard to the two diseases compared. For instance, if, as is commonly stated, lobar pneumonia has a better prognosis than broncho-pneumonia, and is, as we know, a disease of short duration, that would explain the less frequency of the former in hospital, since many infants might recover from it before the parents made

up their minds to hand over their children to the hospital instead of nursing them at home.

Contrast the figures given by Dr. Rivière and Dr. Morse, as representing the proportion between lobar pneumonia and broncho-pneumonia—one to three by the former, two to one by the latter. Will the exclusion of infective cases account for all that difference? May not epidemic variations, or variations in the epidemic prevalence of one or the other at different times, have much to do with this?

Then come differences of results with regard to lobar pneumonia at different ages. It is stated that this is more common at the ages under two than in any other annual period. But what is known of the actual population of any community, or hospital district, at the different annual periods? Are infants under one year more numerous than children in the eighth year? Assuming a uniform rate of childbirth, year by year, the infants would be in excess, not of course of all the older children, but of those belonging to any one annual period, because all older children have once been infants, but not all infants become older children. In a small community the birth rate is not, of course, uniform, but the larger the community the more would it be likely that uniformity should be reached.* Then on the same subject differences might be expected in the necessity felt for the transference of a case to the hospital.

Certainly it is difficult to see why lobar pneumonia should be common in the first two years of life, should then become relatively infrequent, and then again become as common as we think it is in young and middle-aged adults. But here again I am not aware that a careful comparison has been made between the pneumonia cases and the actual population at different ages.

* That this is generally true is shown by the census returns; but it is doubtful if the difference in the populations for each year will account for all the difference in the incidence of the diseases under consideration.

The most natural way to explain discrepancies in statistical results of a disease or diseases which frequently recover is to suppose that one or other observer has made an error in diagnosis. I have already said that Dr. Charles West thought that an exaggerated importance, attached to lobular pneumonia, led to an under-rating of the frequency of lobar pneumonia. But, of course, a disease should not be determined to be before us from the probability of its occurrence, but from the presence of unequivocal or pathognomonic signs could we but discover them. And herein undoubtedly lies one of the difficulties of the situation.

Dr. Rivière admits this: he says, "the diagnosis between lobar pneumonia and broncho-pneumonia is often impossible, and statistics based on diagnosis are untrustworthy." He places most faith in the occurrence of crisis as a distinguishing feature of lobar pneumonia, and with the absence of this he thinks the diagnosis between true lobar pneumonia and broncho-pneumonia with a lobar distribution must fail.

For the purpose, not of determining the nature of an individual case, but of estimating the probable proportion of lobar pneumonia and broncho-pneumonia in a series of cases, he proposes to check a certain number of cases by post-mortem examination, ascertain the proportion in which a mistake has been made, and apply these facts to the other cases which recover, that is, to assume that the same proportion of mistakes will have occurred in the cases which recover as in those that have died.

This method probably gives as sure results as can be obtained for statistical purposes, until, if ever, our diagnostic methods can be improved. So far as a crisis is concerned, one would not be inclined to attach too much importance to its absence, knowing as we do that a large proportion of cases of adult croupous pneumonia terminate by lysis. Writers also speak of a *pseudo*-crisis, meaning thereby a fall to normal or nearly normal the day before the final fall. Certainly in some cases of lobar pneumonia the temperature also falls very low on the antepenultimate

day of pyrexia, as well as the penultimate, constituting what some would no doubt like to call a pseudo-pseudo-crisis. And if we add one or two more such falls we may get so many pseudos that we may easily, I am sure, fall into a *pseudo*-diagnosis, and so the temperature may fail us altogether. No doubt this sign, like any other, is not unequivocal.

But Dr. Morse appears to have no difficulty in the diagnosis without the assistance of this pyrexial feature, since he observes that there were 64 cases with crisis to 29 with lysis among his lobar pneumonias in the first two years of life ; and of these the percentage of crises in the first year of life was 54, in the second year 77·5 per cent. Without a very much larger series of cases it would be unwise to infer from these that the two periods of life always present such a difference. He regards his observations as being "consistent with the general opinion that crisis is less common in the first year than in later life."

Jürgensen is quoted by Dr. J. D. Rolleston ('British Journal of Children's Diseases,' 1906, vol. iii, p. 538) as saying that the whole question is yearly becoming more complicated, and suggesting that the diagnosis of lobar pneumonia can only be settled by the absence of a wide-spread capillary bronchitis.

This would surely be again an attempt to found a diagnosis upon the presence or absence of a sign which is not exclusively associated with one form of the disease, in other words, is not distinctive. It is true that generally capillary bronchitis is rarely an accompaniment of croupous pneumonia, except in the very last stage of some fatal cases ; but it surely cannot be affirmed that a wide-spread capillary bronchitis—or, clinically, that wide-spread râles—are present in every case of broncho-pneumonia.

In the 94 cases which were examined post mortem at Guy's Hospital in the year 1905, the brief clinical notes accompanying the reports do not, in many cases, enable one to describe exactly all the clinical features, but in

25 at least where the statements are clear on that point there were no general râles or rhonchi, as against 21 where rhonchi or general râles were certainly present.

I should myself be very unwilling to accept the absence of râles generally as a proof of the croupous nature of the pneumonia. Having a bearing quite in the opposite direction is the belief expressed by Dr. Gossage at the meeting of the British Medical Association in 1900 ('Brit. Med. Journ.,' vol. ii, 1900, p. 564), that lobar pneumonia may cause an acute bronchitis as a result of its infective nature, and hence that not uncommonly broncho-pneumonia may follow lobar pneumonia. But clearly the cases in which the bronchitis followed the lobar pneumonia, but did not lead up to the lobular pneumonia, would militate against Jürgensen's suggestion to take a bronchitis as proof of the lobular character of the alveolar lesion. Undoubtedly the two conditions may co-exist, and broncho-pneumonia is even spoken of as a common complication of pneumonia, and as persisting so as to cause a fatal result when the original pneumonia has cleared up. Obviously our statistical results must be seriously complicated by cases of this kind, and so far, in statements of this order, I have not seen a column reserved for the cases in which the two lesions have both occurred. It must be a matter of chance whether they go under one or the other head: if fatal early they may be seen to be mixed; if fatal later they will probably be regarded as broncho-pneumonia; if seen early and recovering, lobar pneumonia will be recognised; if seen first later and recovering, perhaps broncho-pneumonia.

Does the appearance of lobar pneumonia in children differ from that in adults? No doubt it does, but not in a way to make it more clearly resemble broncho-pneumonia. The point noticed by all observers is that it is less coarsely granular. Gillet ('Gazette des Hôpitaux,' 1903, 2074) says it is less well defined than in the adult; less well limited; it has not the same consistence nor the same finely granular aspect. The parenchyma is always

moist, the surface not opaque, but translucent from richness in juice.

The condition of broncho-pneumonia in a previously hepatised lung is thus described by Dr. Rivière: "The consolidation is massive and the cut surface is very moist, not granular, and is marbled with grey broncho-pneumonic patches on a ground of intensely œdematous lung."

Of course it is admitted that a broncho-pneumonia may occupy or involve a lobe or part of a lobe, so as to give, clinically, a very close resemblance to a lobar pneumonia, but it is clear that the lobular distribution can be at once recognised post mortem. So that the conclusion seems to be that there is no real difficulty in distinguishing the conditions post mortem so long as one recognises that they may co-exist.

Great as is the service rendered to us by bacteriology in this question of the diagnosis between lobular and lobar pneumonia in children, it seems to give us little help. For, first, children rarely expectorate; and though it has been shown that some material for observation can be obtained by placing a swab at the back of the child's throat at the moment that it coughs, still even then the fact that the pneumococcus is present in both forms of the disease makes the inferences to be derived from this method of research somewhat doubtful, and as a fact I find little in recent publications to show that much help can be obtained in this way.

The conclusion then seems to me to be that the results of observation in one time or place cannot be accepted for any other time or place; that there are probably considerable differences in the incidence of the two forms of pneumonia which are not to be entirely accounted for the personal equation of the observers, or by prejudicial opinions as to the frequency of one or other form; that broncho-pneumonia is very much less frequent after three years of age; that lobar pneumonia occurs in infants probably much more than was the current belief a few years ago; possibly its incidence may be more liable to

variation from epidemic or other considerations than that of broncho-pneumonia.

A few words may be said as to the reasons of the differences which occur, and as to the value of the facts so far as we know them in our relation to the children as our patients.

It has naturally been suggested that there may be anatomical differences in the lung which will account for the greater frequency of one or other disease at the infantile age. But where should the difference be expected? Modern returns, as I have shown, are mostly in favour of a great frequency of lobar pnemonia in infants. The infantile lung can accommodate almost equally well, or resists with almost equal impotence, either form of disease alone, or the two simultaneously or successfully. It is the lung of the child at five, seven, or ten, which has so much resisting power to broncho-pneumonia. It is clearly the exemption of these greater ages from the latter disease which has to be explained, and not the relation, either positive or negative, of lobar pneumonia to any one period of life. The late Dr. Washbourn, in the Croonian Lecture for 1902 ('Lancet,' vol. iii, 1902, p. 1531), makes the following statement: "The chief differences between the lung of the child and that of the adult are that in the child the lobulated structure of the lung is more distinct, the connective tissue being more pronounced; and the alveoli of the newly-born child are from ·03 to ·06 millimetre in diameter (Kölliker), while those of the adult are from ·05 to ·1 millimetre. As growth continues fresh alveoli do not appear to be added, the increase proceeding from an expansion of all the parts."

It seems to me that these differences scarcely supply an adequate reason for the variations in the incidence of lobar and lobular pneumonia, especially when we realise that there can be no material difference in size between the middle-aged adult lung and the senile lung, though differences in pneumonia incidence are well known as

between them. There may be differences in vascularity which could account for it; but it would not be surprising if for the present we failed to explain the age-incidence in pneumonia, seeing that analogous etiological peculiarities exist in connection with numerous other infective and metabolic disorders.

Prognosis.—When we turn to the question of the advantages of a correct diagnosis we must admit that diagnosis may have a practical application or a purely scientific value, with the corollary that what is at present of merely scientific value may later have a valuable practical use. The practical applications of diagnosis are mainly in the directions of prognosis, treatment and prevention. And in the reference to the question before us it has chiefly been urged that it is everyone's duty correctly to differentiate between the varieties of pneumonia, because the prognosis is different—or even *so* different. But I would not attach too much importance to this; for at times when, or in places where, the mortality of lobar pneumonia in infants is 27 per cent., very little reliance could be placed in an individual case on the statistical probability that it would recover. Similarly, when or where broncho-pneumonia is exceedingly rare above three years of age, in that period of life there will with equal rarity be the need to exercise the function of prognosis. But really, as we all know, prognosis has always to be considered with regard to the individual case. Extremely bad cases of broncho-pneumonia are sometimes among those that recover, and a case of lobar pneumonia commencing favourably may ultimately be fatal. No doubt in the early stage the probabilities may be taken into consideration in pneumonia, as in other diseases, but ultimately, whatever the variety, the condition of the patient must be the guide.

It is, of course, well known that the number of the leucocytes in the blood have been regarded and used as a basis of prognosis in pneumonia; but not perhaps with the greatest confidence, since it is admitted that the leuco-

cytosis is the result of two factors, namely, the intensity of the infection and the defensive power of the individual. Thus a constantly high leucocytosis is looked upon as a favourable sign, because it indicates a strong reaction on the part of the individual, and a low leucocytosis as unfavourable for a like reason. Yet in particular cases a mild infection may call forth only a slight leucocytosis, and a virulent infection produce a high leucocytosis, in which case the number of the leucocytes might not be at all in proportion to chances of recovery.

Some relatively recent observations on the leucocytosis of broncho-pneumonia and lobar pneumonia are published by Heiman (in the 'Archives of Pediatrics,' October, 1905). In nineteen cases of broncho-pneumonia aged from 10 months to 5½ years the leucocytes numbered from 12,000 to 73,000. Twelve cases recovered; in them the count was high in the first days of the disease and fell towards the end except in two cases complicated, one by mastoiditis, the other by tonsillitis.

Seven cases were fatal; in them also the count was always high at the beginning of the illness; in four of them it fell considerably a little before the fatal issue, but in the other three the high count was maintained throughout.

In 24 cases of lobar pneumonia, aged from 2½ years to 9 years, the leucocyte count varied from 20,200 to 55,800, except in two cases, one of which was preceded by typhoid fever, and the other was accompanied by pleurisy, and in those there was no leucocytosis. There were only two fatal cases, and in these there was very marked leucocytosis during the height of the pneumonia, and a considerable diminution immediately before death.

The author remarks that the amount of leucocytosis was independent both of the extent of the lesions and of the elevation of the temperature, but that as a rule it diminishes as the signs clear up, and if not, some complication or a fatal result is to be feared.

In lobar pneumonia, on the other hand, the leucocytosis

is directly in proportion to the extent of the lesion; it increases progressively and reaches its height a little before the crisis; but a fall before the crisis is not sufficiently constant to attach much importance to it.

Cerebral symptoms.—Turning now to another side of the subject of pneumonia in children, it appears that attempts have been made to ascertain the intimate pathology of some of its complications by taking advantage of that recent addition to our means of research and treatment, namely, lumbar puncture. Drs. Nobécourt and Voisin have published in the 'Revue Mensuelle des Maladies de l'Enfance' some observations, which are interesting, even though the ultimate outcome of them must, I think, be small. The paper is entitled "La Ponction Lombaire dans les Infections Broncho-pulmonaires des Enfants," and the object was to ascertain the condition of the brain and spinal cord in cases of pneumonia with cerebral or nervous symptoms. Hitherto we have been content to believe that the temporary, recoverable cerebral disturbances, which are common not only to pneumonia but to typhus, typhoid, scarlatina, indeed, to all general infections affecting the body with any degree of severity or virulence, must be due to the circulation of toxines. When we know the frequency with which a general pneumococcal infection takes place, and that definite local inflammations may occur as a result of infection by the pneumococcus in many organs, it would not surprise us if it were found that the cerebral symptoms were sometimes due to its direct invasion. What would want explanation would be the comparatively short duration of the symptoms in most instances.

Messrs. Nobécourt and Voisin performed lumbar puncture in thirty-one cases of pneumonia. In seven cases there were no cerebral symptoms; they were cases of generalised bronchitis with or without broncho-pneumonia. The other twenty-four cases were cases of broncho-pulmonary inflammation accompanied by meningeal symptoms. With the exception of two cases of bronchitis all

are described as broncho-pneumonia. But the cerebral symptoms are of very varied kind, and include stiffness of the neck in sixteen cases, stiffness of the limbs in ten, convulsions in ten, strabismus in three cases, conjugate deviation in three cases, and in one or two cases only the following: unequal pupils, otitis, facial paralysis, ptosis, paralysis of the four limbs, twitchings, trembling, champing, and grinding of the teeth.

In the first group of cases the liquid was mostly scanty, from 5 to 10 centimetres, clear, limpid, containing in two thirds of the cases a trace of albumin. Only twice were leucocytes present, that is, in one a few lymphocytes, in the other five lymphocytes and four polymorphonuclear cells. In three cases examined bacteriologically the liquid was sterile.

In the second series of cases, in which cerebral symptoms occurred, the liquid was more abundant, from 10 to 20 or even 30 to 35 centimetres, mostly clear and limpid. In only eight out of twenty examined was albumin found. In one half of the cases no leucocytes were seen; in the other half lymphocytes and four polymorphonuclears were seen, sometimes one, sometimes the other, sometimes both in about equal numbers.

Bacteriologically, amongst nineteen cases examined in this way all were sterile except two, and these yielded pneumococci.

As will be seen, these results are not very helpful; the main fact seemed to be that the cerebro-spinal fluid was more abundant in the cases with meningeal symptoms; the cytological observations in the smaller group of cases are not numerous enough to give a proportion comparable with the other group. Even in the cerebral group the positive result of the bacteriological examination only occurred in one sixth of the cases; but it is at least suggestive that in those two cases the liquid was turbid, and contained polymorphonuclear cells, while in each case there was a purulent or sero-purulent œdema of the brain. Moreover, in one case there was a purulent pleurisy, in

the other bilateral purulent pleurisy and purulent pericarditis.

However, more extended researches would have to be carried out to make it clear that any pronounced advantage is to be derived from this method of observation, whether as regards diagnosis or prognosis, and researches not only in cases of pneumonia, but also in other diseases. A recent writer (Cantineau, 'Jour. Méd. de Brux.,' March the 14th, 1907), says that lymphocytosis of the cerebro-spinal fluid is absolutely diagnostic of syphilis; that in tuberculous meningitis the cerebro-spinal fluid contains many lymphocytes and a few polymorphonuclears, while the leucocytosis is almost exclusively polymorphonuclear in pneumococcal, meningococcal, and streptococcal meningitis.

Treatment.—However great the interest in the pathology, complications and prognosis of pneumonia, it is surely upon its treatment that one's thoughts ought to be centred; and yet one has to confess that the means of directly influencing the course and progress of pneumonia are by no means always ready to hand. Even if some of us are confident of the powers of the drugs we employ to affect the processes in the lungs, or of our own cleverness and acumen in divining the right moment to intervene with fresh combinations or new methods, it is obvious even from reading many of the recent papers on the incidence and mortality of different forms of the disease that no great importance is attached to personal equation in the physicians treating the cases.

It is interesting to look back and see the changes which have taken place in regard to the therapeutics of children's pneumonia. One can go no further into this subject than the period when children's diseases were first definitely set apart for separate consideration, and in Dr. West's treatise we see the antiphlogistic methods under discussion. In his work, already referred to (p. 341), he quotes Barthez as to the rareness with which active treatment, by which he means abstraction of blood,

is "necessary in children." This rather suggests that the cases he is talking of were cases of lobar pneumonia, with the more favourable outcome and less mortality which it is known they possess as compared with broncho-pneumonia. He then goes on to say that he rarely meets with pneumonia in such an early stage as he used to when he was a junior. Dr. West was at this time about forty-nine years of age, and must have had then a large practice in children's diseases, and had arrived at a time of life and position in the profession which, no doubt, led him, as a consultant, to see acute cases rather in their later than in their earlier stages. He continues, "he never can forget the good results which he saw in the treatment of pneumonia in healthy children, how it reduced the heat of skin, abated the hurry of breathing, and relieved distress" —benefits which he states were admitted even by writers of that day. And he says: "I should be disposed to add that, in some instances, it cut short the disease." But after all it was only during the first twenty-four or thirty hours that a good result could be expected, and he deprecated it at the stage of fine crepitation or bronchial breathing. That day is surely passed, and few of us can have seen a child bled for pneumonia, even of the acutest lobar variety; certainly not at its very onset.

Then came antimony and mercurials, the former of which, at any rate, was in vogue in my earlier professional years.

In the present day the tendency no doubt is to deal somewhat differently with the two forms, lobar and broncho-pneumonia: to treat the former as a local complaint for which drugs of the expectorant class are likely to be useful, and to regard the former as an infective disease running its own course and little likely to be influenced by drugs. But there are still those who recommend the well-known cardiac depressants such as aconite, antimony, and veratrum viride at the commencement of both broncho-pneumonia and lobar pneumonia, a treatment which can be only based on a view similar to that which justifies

venesection. But if lobar pneumonia has anything like the small mortality percentage which is given by some writers, as for instance, the less than 1 per cent. quoted already, surely it is mere waste of effort to give any drug at all unless the case should be one either of exceptional severity from the first, or should after a longer course reach a condition of great danger. Even then it occurs to me that the analogy of treatment in other acute general infectious diseases would not lead us to drugs which only act as cardiac depressants. Expectorants can be of only secondary value in a real lobar pneumonia, where it is obvious that the fibrinous deposit is absorbed and not spat out, unless in such cases as are accompanied by marked bronchitic phenomena. My own practice in broncho-pneumonia for many years, like that of many other English practitioners, has been to give what one called expectorants, and especially, indeed almost exclusively, ipecacuanha and carbonate of ammonium. How far either of these promotes the removal of secretion from the bronchial tubes by process of expectoration it may be difficult to say. The object should be to promote absorption of products in the alveoli, and expectoration, possibly absorption, certainly the diminution, of the excretion which forms in the bronchial tubes. Ipecacuanha I regard as a drug which modifies secretions from the bronchial mucous membrane, and I believe it does more good in that way than by driving the secretion already formed out through the larynx. This process, true expectoration, is obviously of secondary importance, as will be seen if we compare the bronchial tubes with the urethra. In inflammation of the latter, the familiar gonorrhœa, the secretion escapes freely enough, inconveniently so, but the cure does not follow thereby, until the conditions of the mucous membrane favourable to secretion or pus formation have been modified by internal remedies or local antisepsis.

Similarly with the secretion of bronchitis or the bronchial element in broncho-pneumonia, ammonium carbonate no doubt acts partly by stimulation of the circulation, possibly

by increasing the power of expulsion of the bronchial tubes; but the large number of cases in which expulsion of mucus or phlegm is a very small feature must owe their recovery to some other remedy or to some other factor in this.

There can be, I think, no doubt that the study of bacteriology must gradually lead us to look with a good deal of scepticism at the influence of drugs in these specific processes except in a few instances where the evidence is overwhelmingly strong of a direct effect upon the disease. I refer of course to such illustrations as quinine in malaria, mercury and iodides in syphilis and a few others.

But on other lines than the cardio-depressant and expectorant theories have drugs been attempted even recently.

I forbear, nor have I time, to enter into the general discussion on the treatment of pneumonia in adults as well as children, which was initiated by Sir Lauder Brunton's recommendation of chloride of calcium. This is admittedly only a method of assisting the heart in its functions, and, therefore, it should be, if it has any value, applicable equally to the treatment of typhoid fever, or any severe infectious disorder in which, ultimately, the heart's capacity to continue its driving power is challenged. Of course, if we can find means to keep the heart beating perpetually, whatever the associated conditions, patients will never die, whatever diseases they have; but our efforts in any complaint should surely be directed to checking its progress short of the period at which the heart is brought into a critical condition.

One cannot discuss the treatment of pneumonia in the present day without asking whether any help can be obtained from bacteriological methods. Attempts have been made, of course, to provide an antitoxic or antibactericidal serum, which would neutralise the ill-effects of the pneumococcus and its toxines. The late Dr. Washbourn was at work upon this subject shortly before his lamented death, but though he tried a serum in some

cases, I believe he had no great success; and, at any rate, there does not appear in this country to be available a serum upon which any reliance can be placed. In foreign literature reference is often found to Römer's serum, and an article on the subject by Winckelmann (in the 'Münchener Medicinische Wochenschrift,' Jahrgang 53, pp. 25–29), gives a very good review of the subject up to that date.

Römer obtained a serum from horses, cattle, and sheep, which had been treated with various strains of pneumococci from human sources. It is a bactericidal polyvalent serum. Winckelmann treated sixteen cases with it: two were aged ten, one eighteen, two twenty-three, one twenty-five, and the others were between thirty and fifty-seven. The results were very variable, often apparently negative. Five cases, or 31 per cent., died, which is not a striking success, but it must be stated that they were all severe cases in which the serum was used.

Of fifty-one cases altogether hitherto published, in which the serum has been tried, the mortality has been 17·6, that is to say, nine were fatal. Winckelmann says that in the large towns, presumably in South Germany, the general mortality is 20 to 25 per cent., but in military service it is as low as 3·5.

His general conclusions are that it is probably harmless; that its good result is not certain, but probably it has been useful in severe cases, for which he finally advises its use.

I am struck in reading the accounts of the collection of cases, to some of which I have referred, with the frequency with which, especially in America, it is recommended to be satisfied with a treatment, which is as nearly as possible negative, or the positive side of which consists solely in *ventilation*. Northrup,* for instance, treated a case in the following fashion. It was a child, aged 14 months, suffering from broncho-pneumonia. The child was placed in the largest available room with two doors and two

* 'Med. Record,' February the 18th, 1905.

windows, one of each being constantly open. It was in December, the air temperature was 28° F., and the nurses wore fur. The patient had cold water *ad libitum* to drink and the face was often sponged. But the feet were put into hot water baths under the clothes, and hot saline enemata were administered on account of flatulence. The case ran twelve days, and terminated by a crisis, and the only medicinal treatment employed was a total of one-fifteenth grain of strychnine, and one drachm of whisky.

A year later Northrup published another case in which a similar method was pursued ('Boston Med. and Surg. Journal,' February the 22nd, 1906, p. 216). The patient was a boy, aged 13 years, and the attack was severe; the temperature on the third day rose to 105° F., and reached 104° F. or 105° F. every day for nine days. The whole left side was ultimately involved, pleurisy was present, there were violent delirium, picking at the bed-clothes, and risus sardonicus, and the attack was succeeded by a condition of mental disturbance reminding the author of the post-typhoid state associated with exhaustion. The treatment was as follows: The bed head was placed between two open sashes in a bay window; the lower sashes were opened to their utmost. As the author racily remarks, "the working rule was, nothing between the nose and the North Pole." It was in the month of March, the temperature of the room was, perhaps, 40° F., and the nurses wore heavy wraps night and day. The boy had no extra cover over his chest, his arms were out, and in the first week he was allowed to tear open his shirt and expose his chest as he liked. Not a word is said about drugs, nor is even the diet mentioned; but then the paper was written as an illustration of the advantage of a fresh-air treatment over the coddling methods of some years ago.

This contrasts curiously with the practice of recent times, not yet entirely given up, in which the child with broncho-pneumonia was confined within the five walls of a canvas tent, was deluged with the vapour and steam of a boiling kettle close by, while the chest was closely

wrapped round with a jacket poultice—or in later times a thick layer of cotton-wool.

The change from this coddling system to the advanced open-air method just mentioned must expose the present generation to as much criticism as that which we have ourselves been ready to shower upon the physicians of the early half of last century. But the possibility that ventilation is the proper line of treatment cannot be denied, though it must be confessed that it is not a very strong or heroic step to take. But as contrasted with the fear of draughts and cold one must remember that it has long been shown that the cold-bath treatment of typhoid fever improved rather than harmed the thoracic complications of the disease, that, as shown by Dr. Lees, children could stand very well the application of ice to the chest in pneumonia, and that the treatment has been applied often both in children and adults.

Gentlemen, it is time I brought this address to a close. I have said little about the pathology of pneumonia, not very much about its causation and nothing about its prevention—a subject which may some day find a place, and the need for which must be felt in these instances of family, or village, or epidemic pneumonia which occasionally come under observation; as well as in those individual cases of great liability to pneumonia in which it is commonly said, rightly or wrongly, that the predisposition to the disease increased with every attack.

But no one could have expected that the whole subject of pneumonia in children could be exhausted in one hour. I feel now, as I have felt under similar circumstances, that I have touched only the fringe of the subject, that I should like to devote three or four times as much effort and time to it as I have already done, and, could that be I should perhaps produce results more worthy of the sentiments which have inspired the founder of this lectureship and of the Society under whose auspices it is delivered. (*Read May the 17th,* 1907.)

91. CONGENITAL ABNORMALITY OF THE EYE.

By HARVEY GOLDSMITH, M.D.

P. C—, aged 10 weeks. First seen October the 19th, 1906.

Opacity of left cornea.

The mother noticed a defect on the third day. "The eye was not red and the growth was not quite over the eye."

When first seen the lower and outer quadrant of the left cornea was occupied by a triangular mass, opaque, of porcellaneous appearance, and with a broken edge. It seemed to be flaking off. The crescentic segment of the sclera adjoining the base of the opacity had a somewhat bluish tinge.

October the 3rd.—The mass is now decidedly smaller than it was a fortnight ago. The pupil seems to be a little drawn towards it. Upon dilatation the outer margin of the iris seems to pass behind the opacity and to come forward, the anterior chamber being shallower than on the inner side, but neither before nor after mydriasis can the whole circle of the pupil be made out. Fundus is normal. To-day the scale is more transparent at its upper flange-like border, but it is quite opaque below and here it is rugose. No staining with fluorescein.

October the 17th.—Opaque portion smaller. Nebulous area persists.

November the 17th.—A month later the densely opaque portion was much smaller, the more nebulous portion covering about the same area as formerly. The iris still appeared to be drawn up towards the porcellaneous opacity.

December the 21st.—The opaque scale is breaking up.

February the 2nd.—The scale now appears to be slipping down and the iris to be adherent to the nebula, which is

now fading sufficiently to allow of its colour appearing through it.

June the 1st.—Nebula much more transparent. There is now only a very minute scale or plaque left, and this still looks like a morsel of very thin egg-shell and is approaching the lower border of the large nebula.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

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92. A CASE OF ACHONDROPLASIA.

By S. J. ROSS, M.D.

(Introduced.)

A. B—, aged 12 years. Born in South Africa, an only child. Father an epileptic from the age of fifteen years; has lately had two attacks of apoplexy. Mother healthy.

This case shows typically stunted growth; arms short and fingers trident; legs short; lordosis marked; prominent abdomen; waddling gait; depression at the root of the nose by reason of the foreshortening of the base of the skull. Circumference of head, 23 inches; intellectual powers normal. Length of humerus, 6½ inches; length of forearm, 5 inches; length of femur, 9 inches; length of leg, 8 inches; the lower end of the femur is enlarged. Circumference, 11½ inches.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

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93. A CASE OF CONGENITAL DILATATION OF THE COLON.

By HENRY SKELDING, B.C.

A. S—, aged 9 years, was admitted into hospital on the first occasion at the age of six—three years ago. His

condition then was the following: A dull, stupid-looking child with pinched expression, not anæmic. Circulation poor; chilblains both hands. Upper and lower limbs flabby and wasted.

Abdomen.—Soft, much distended, very prominent, with greater prominence over the sigmoid. Measurement at umbilicus 26 inches. Hyper-resonance. Marked bell-sounds. Marked vermicular movements. Is continually passing small soft lumps of fæcal matter. No diarrhœa. *Per rectum* nothing abnormal to be made out.

Family history.—Eldest of five children, others apparently healthy. No rickets, syphilis or tuberculous history; has been constipated since birth, and always had a "big belly."

During his stay in the hospital, he had turpentine enemata every other day; with dieting, the abdomen diminished from 26 to 22 inches.

He left the hospital but slightly improved. Re-admitted on June the 12th 1907.

Postscript, December, 1907.—On re-admission, after careful dieting for ten days without any improvement and the child seemingly losing control of his sphincters, constantly passing small pellets of fæces, I decided upon a laparotomy. An incision was made in the median line below the umbilicus. On opening the peritoneum the *transverse* colon, enormously distended, protruded, and was with great difficulty kept back. The whole course of the bowel was traced and presented the following conditions: The small intestine was flabby, anæmic, and contracted and empty, the ileo-cæcal valve and *ascending* colon was in much the same condition, but evidently contained small lumps of fæcal matter and gas. On reaching the hepatic flexure there appeared to be a constriction, above which the *transverse* colon was enormously distended and full of gas. At the splenic flexure the distension ceased and the *descending* colon and sigmoid appeared collapsed, containing no gas or fæcal matter. The *transverse* colon appeared to have "glissaded"

forward, forming an acute bend at the hepatic and splenic flexures.

The somewhat severe manipulation caused temporary collapse, necessitating greater expediency. The omentum, previously tucked up out of sight, was brought well down, the transverse colon manipulated, emptied of gas, and pushed well up; the abdominal wound sewn up as usual. With the exception of the mental condition the patient steadily improved. The last report from the mother was that the child was going on well and had complete control over his sphincters. I can only attribute the improvement to the manipulation of the bowel and the replacement of the transverse colon. The measurement when the child left the hospital was twenty-two inches.

(Exhibited at the Provincial Meeting at Bedford, June the 15th, 1907.)

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94. A CASE OF EXOPHTHALMIC GOITRE.

By C. G. JOHNSON.

(Introduced.)

N. B—, aged 14 years 7 months. First seen April the 24th, 1907. Liable to sore throat. Had croup when an infant, diphtheria at age of eleven years. Noticed swelling three weeks.

Elder sister suffers from exophthalmic goitre.

Symmetrical enlargement of thyroid (slight). Slight thrill in right lobe; choking sensation at night; throbbing of carotids; tachycardia, pulse 120 to the minute; flushes occasionally. No exophthalmos or von Graefe's sign; muscular tremor; slight anæmia; very nervous.

Treatment.—Hæmatinic tonics.

(Exhibited at the Provincial Meeting at Bedford, June the 15th, 1907.)

95. A CASE OF ADVANCED MITRAL STENOSIS WITH REGURGITATION IN BOY, AGED FIVE AND A HALF YEARS.

By W. A. SHARPIN.

(Introduced.)

History.—Was in the isolation hospital last year and the beginning of this year. Rheumatism in knee-joints with effusion two years ago. Never kept in bed.

During November, December and January was ill with scarlet fever, no rheumatism following.

First seen.—February the 19th, 1907, when there was considerable orthopnœa and he was unable to lie down to sleep.

Present condition.—Able to walk about. Sleeps well and quietly.

Heart.—Impulse diffused and forcible in third, fourth, fifth, and sixth spaces. Epigastric pulsation.

Dulness.—Above, to third rib; right, to mid-sternal line; left, to anterior axillary line; below, to left costal arch. Slight but distinct thrill felt over area of heart's impulse. At apex in anterior axillary line is a loud systolic murmur with almost absent second sound. No pre-systolic murmur. Loud slapping second sound over the pulmonary valves.

Abdomen prominent. No œdema. Urine, no albumin.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

96. A CASE OF BRANCHIAL FISTULA.

By HENRY SKELDING, B.C.

Child, aged 4 years. Mother says that a swelling on the right side of the neck was noticed when the child was eight months old; it sometimes "increased to size of a

hen's egg and hung down." "After poulticing it burst, a clear fluid exuding, on one occasion to the extent of three parts of a tea-cup." It now appears to have shrunk, leaving a sinus extending upwards and outwards for about ½ inch.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th*, 1907.)

97. A CASE OF ENLARGED SPLEEN.

By WILLMER PHILLIPS, M.D.

(Introduced.)

D. M—, aged 10 years, admitted March the 13th, and discharged April the 20th, 1907.

Complaint.—Breathlessness when running about; loss of appetite; paleness of face; duration not definite. Symptoms have been coming on insidiously for some months past.

Examination.—Skin lemon yellow tint; small dilated venules on the face; lobes of ears waxy colour.

Heart.—Apex impulse ½ inch inside the anterior axillary line in fifth interspace; sounds weak, but normal.

Lungs.—Apex of left lower lobe, inspiratory murmur of slightly higher pitch than corresponding point on right side. No adventitious sounds.

Alimentary system.—*Teeth* sound, gums sound. *Abdomen* full, walls lax. No free fluid. *Spleen* palpable, anterior edge hard, and easily determined, reaches to three fingers' breadth below the costal margin. *Liver* palpable two fingers' breadth below the costal margin in nipple line. Upper limit of dulness in nipple line reaches lower border of fourth rib.

Blood count.—Red corpuscles, 5,100,000 per c.mm.; hæmoglobin, 100 per cent.; white cells, 6400 per c.mm. Differential leucocyte count: Eosinophiles, 5 per cent.;

lymphocytes and large hyaline, 55 per cent.; polynuclears, 40 per cent.

Treatment.—Arsenic and iron. Condition unchanged. Weight 4 stone on admission, decreased by 2 lbs. Temperature practically normal during stay in hospital. Pulse usually 90 to the minute. Respirations 20 to 24 to the minute. Urine normal.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

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98. A CASE OF RENAL CALCULUS?.

By HENRY SKELDING, B.C.

F. C—, aged 1 year 4 months. Child recently admitted into hospital with following previous history:

"During the last month or six weeks the mother has noticed that the child had screaming fits, it doubling itself up as if in pain. These attacks were intermittent, at which times the water passed was cloudy."

Family history.—A brother, aged 6 years, had nephrectomy performed two years ago for stone.

Since admission the child has been resting. No attacks of pain; urine normal. A skiagraph has been taken. No calculus visible.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

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99. A CASE OF INTUSSUSCEPTION; OPERATION; RECOVERY.

By HENRY SKELDING, B.C.

This was a case of complete intussusception, involving the ileo-cæcal valve and 3 inches of the ilium. Child,

aged 11 months, has been severely burnt since, as shown by scars.

(*Exhibited at the Provincial Meeting at Bedford, June the* 15*th*, 1907.)

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100. KIDNEY WITH URIC ACID CALCULUS IN THE PELVIS.

By W. GIFFORD NASH.

The kidney with an uric calculus in the pelvis was removed by the exhibitor two years ago, owing to excessive hæmorrhage when incising it for stone. The patient is now doing well. Brother of case (No. 98) shown by Mr. Henry Skelding.

(*Exhibited at the Provincial Meeting at Bedford, June the* 15*th*, 1907.)

101. DIVERTICULA OF SMALL INTESTINE.

By HENRY SKELDING, B.C.

Boy, aged 9 years, admitted into hospital with symptoms of acute intestinal obstruction. State of collapse; thin rapid pulse; subnormal temperature. Abdomen distended, tympanitic all over; no visible peristalsis. Liver dulness obliterated. *Per rectum* nothing abnormal could be felt, a mucous, watery discharge exuding. Vomiting and uneasiness commenced only two days previous to admission. Operation took place immediately on admission.

The following condition was found:

The small intestines were enormously distended. A band about the size of the little finger was found attached to the inner wall of the abdomen just below the umbilicus at one end, and passing directly backwards and downwards, terminating in a dilated portion of intestine about 2 inches

in length, which sprung from the ilium about 10 inches from the ileo-cæcal valve (evidently the remains of the omphalo-mesenteric duct, partly closed and partly still patent). The band was cut and ligatured as close to the dilated diverticulum as possible. The diverticulum was much larger in circumference than the bowel itself. The small intestines were coiled round the diverticulum at its attachment, which had become œdematous and inflamed.

The child recovered consciousness, but died eighteen hours after from collapse.

Specimen shown.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

102. VESICAL CALCULUS.

By HENRY SKELDING, B.C.

From a boy, aged 4 years, by operation. A history of inconvenience for six weeks only. No blood noticed in the urine at any time. A constant desire to micturate the only symptom.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

103. GLIOMA OF RETINA.

By HARVEY GOLDSMITH, M.D.

AND

WILLMER PHILLIPS, M.D.

(Introduced).

Eye removed from a child, aged 4¼ years. Symptoms: pain and lachrymation.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

104. MICROSCOPICAL SPECIMENS.

By H. W. L. WALLER, M.B.

(Introduced),

and

C. G. JOHNSON

(Introduced).

Specimens of (1) tinea tonsurans; (2) diphtheria bacillus; (3) tuberculous gland; (4) lymphadenomatous gland; (5) endothelioma of humerus; and (6) blood from splenomedullary leucocythæmia were shown by Dr. H. W. L. Waller (introduced). (7) A blood-smear of exhibit No. 97, Dr. Willmer Phillips' (introduced) case; and (8) bilharzia ova, Mr. Skelding's case, exhibit No. 109, were shown by Mr. C. G. Johnson (introduced).

(*Exhibited at the Provincial Meeting at Bedford, June the* 15*th*, 1907.)

105. SKIAGRAPHS.

By G. T. VERRY.

(Introduced.)

(1) Tubercular hip, boy, aged 10 years; (2) tubercular hip, boy, aged 9 years; (3) old compound fracture of femur; small sequestrum removed from boy, aged 9 years; (4) old sinus of thigh of two years' standing, boy, aged 6 years; atrophy of femur, small sequestrum, two pieces of necrosed bone removed; (5) halfpenny in œsophagus of child, aged 4 years, passed *per anum* six days later; (6) needle in foot, boy, aged 8 years, extracted; (7) supra-condyloid fracture of humerus, good movement after one month, girl, aged 9 years; (8)

sarcoma of femur from (microscopic slide shown) boy, aged 13 years; (9) double thumb; (10) congenital dislocation of hip in a girl, aged 10 years; (11) sinusitis of skull, pus in sphenoidal sinus after a blow on forehead with a stick two or three years ago; (12) fracture of radius and ulna in boy, aged 10 years; (13) broken pin under internal cuneiform bone, girl, aged 11 years; (14) fracture of radius and ulna, boy, aged 6 years; (15) dislocation of elbow; (16) halfpenny impacted in œsophagus and causing much dyspnœa and hoarseness in a boy, aged 5 years, removed with coin-catcher; (17) halfpenny in stomach, passed *per anum* three days later.

(*Exhibited at the Provincial Meeting at Bedford, June the 15th,* 1907.)

106. ACUTE RHEUMATISM IN CHILDHOOD.

By C. O. HAWTHORNE, M.D.

As a topic for debate, acute rheumatism in childhood has at least this virtue—it proposes a number of questions to which confident and appropriate answers are not easily fitted. Hence it offers, what will doubtless be freely taken advantage of to-day, an opportunity for the statement of different and even conflicting expressions of opinion. It well may be that the presentation of such differences by the champions on either side may not provide a settlement of the several vexed and various issues, but the discussion can hardly fail to secure a fairer and more impartial appreciation of the different aspects these possess. And whether converts are made or not, the professors of a necessary agnosticism will be able to find in the clash of opposing views a justification of their inability to do other than halt between two opinions.

At the outset of the discussion may be mentioned the

remarkable recognition of rheumatism in childhood which has distinguished professional opinion in comparatively recent years. Naturally one asks, "Why was this recognition so long delayed?" Most of the writers in the earlier three-fourths of the nineteenth century assert in set terms, that, to quote from one of them, "in early life rheumatism in any form is a rare affection." It is only as the twentieth century approaches that this proposition is seriously qualified, and that we find the initiation of the movement which has led to the present-day definition, that "the most complete and comprehensive manifestation of the various phases of rheumatism belongs to the period of childhood." The suggestion has been made that the change of view is due to the fact that in former times acute rheumatism was regarded purely and solely as a disease of the joints. But this, as a statement of fact, is hardly correct. The recognition of the frequent association of pericarditis and endocarditis with rheumatic joint disease, and also of a relationship between rheumatism and chorea, is fully a century old, and in consulting various authors it will be found that hardly a single organ of the body has not at some time or other been regarded as the site of rheumatic manifestations. Further, again and again the suggestion is made that these visceral manifestations may precede the joint affections, and possibly may occur independently of such affections. Even the existence of rheumatic fever without arthritis was long ago recognised and affirmed by numerous competent authorities. Why, then, was the modern view in reference to the age incidence of rheumatism not promulgated at an earlier date? Is it possible that a change has taken place in the distribution of rheumatic disease? Or is our present position the fruit of more careful study and keener insight? Rheumatic manifestations apart from the joints have long been recognised. Why was this doctrine not applied to rheumatism in childhood until the later years of the nineteenth century? Whatever be the explanation it is not to be found in the

work of the bacteriologists. Bacteriology may have done something to confirm the current creed, but the foundations of the doctrine were clearly and distinctly laid down by earlier clinical observation and reasoning.

Another general question is, "Why does the picture of acute rheumatism in the child differ so conspicuously from that of the same disease in the adult?" It is easy to say that certain tissues in the child are more susceptible, and others more resistant, to the rheumatic poison than are the corresponding parts in adults. But this is one of those explanations that explain nothing. And the fact that the joints in early life so largely escape the rheumatic attack is the more remarkable seeing how frequently, during the same age period, these parts become the site of various infective processes. On similar lines, the occurrence of chorea as a rheumatic event is presented as a demonstration of the severity with which the nervous system in early life suffers from the prejudicial influence of rheumatism. Yet the most acute and severe forms of chorea are seen in adolescents rather than in children, and one of the most impressive effects of rheumatism on the nervous apparatus, namely, hyperpyrexia, is seldom or never met with in early life.

It may be said that these questions are academic and non-practical; but they are well within the area of our debate, and when someone can answer them, we shall be nearer a solution of the problem of rheumatism, and possibly also of other problems, than we are to-day. Perhaps for the present they must be placed among the order of inquiries to one of which Johnson, in a fit of exasperation, was led to retort, "Tell me this: Why does a cow's tail hang downwards, and why is a fox's tail bushy?" And the varied sex-distribution of rheumatism at different periods of childhood must be left, I fear, in the same category.

If now we turn to regard the various clinical incidents which are more or less commonly labelled "rheumatic," we are met by a serious initial difficulty, namely, the non-

existence of any absolute and admitted criterion by which in any individual case the diagnostic position can be assured. Even those who give unqualified assent to the bacteriological doctrine associated in our minds with the patient and ingenious work of Dr. Poynton and Dr. Paine, have to admit that, at present at all events, tests of this order are not available for clinical purposes. Must we, therefore, remain uncertain of our diagnosis in each individual case of suspected rheumatism until by cultures and microscopic slides prepared from post-mortem findings we have a demonstration of the presence of certain micro-organisms in the joints or other tissues? Few physicians will hesitate to answer this question in the negative when it is applied to acute rheumatic disease in the adult. However many causes of acute arthritis may now be recognised, it still remains true that there is seen in adults a well-defined febrile disease associated with articular disturbances—affecting, for the most part, many joints—and with abundant sour-smelling perspirations. But to this picture acute rheumatism in childhood rarely conforms. High temperatures, and especially high temperatures sustained for days or weeks, are decidedly uncommon; arthritic disturbances are usually slight; and free sweating is not a frequent event. Yet, without question, there are intermediate cases between these two extremes, and only those of a profoundly sceptical turn of mind will doubt that the rheumatic fever of the adult is seen also in the child, though usually in a form less demonstrative as regards the bodily temperature and the joint disturbances. This, I submit, is a reasonable faith on the clinical evidence alone, and many will agree that the position has been made a matter of certainty by the revelations of bacteriology. There is also, as we all recognise, a further clinical bond in the tendency to the development, both in the adult and the child, of one or other form of cardiac disease, and this statement at once raises the question why heart disease is so much more common with the rheumatism of childhood than it is with rheumatism in later life.

The explanation, I suggest, is probably to be found, at least in part, in the relative escape of the joints permitting the child to continue its usual activities up to a point long after the painful polyarthritis of the adult has imposed a policy of complete rest. And this, as I have ventured on a former occasion * to urge on the Society, demands an endeavour to protect rheumatic children by informing their responsible guardians of the risks which attend even the apparently trivial illnesses of these children, and of the need for complete rest to meet these risks. I again submit that the recognition of this duty by the profession generally would probably help to save at least some of the children of rheumatic families from the disaster of organic cardiac disease. In connection with the arthritic manifestations of acute rheumatism in childhood may be mentioned two facts which hardly, I think, receive sufficient emphasis. The one is the occasional development of a relatively severe inflammatory attack limited to a single joint; and the other, the restriction of evidences of inflammation—pain, tenderness, and redness—to the joints of the fingers and toes. Both the one and the other may, unfortunately, be accompanied by the guarantee of cardiac valvular disease.

Up to this point, on the question of diagnosis, differences of opinion will hardly arise. Febrile attacks associated with more or less pain in the joints, and occurring without obvious cause, more particularly if accompanied by pericarditis or endocarditis, will, for the most part, be readily accepted as an abundant justification of the diagnosis of acute rheumatism. But what shall be said of the vast multitude of other phenomena which are now presented as expressions of rheumatism in the early years of life—of tonsillitis, pleurisy, bronchitis, pneumonia, chorea, nervousness, anæmia, purpura, abdominal pains, epistaxis, nephritis, erythemas, subcutaneous nodules, phlebitis, enuresis, meningitis, orchitis, periostitis, perityphlitis, and the rest? For many of these a good

* 'British Journal of Children's Diseases,' March, 1907.

case may certainly be made out, at least to this extent, that more or less occasionally they occur in association with the cardiac, febrile, and arthritic evidences of the disease. In such circumstances the conclusion in favour of a rheumatic interpretation is a fairly strong one. But what is the position when any one of these exists apart from the generally admitted evidences of rheumatism? Is, for example, chorea, or tonsillitis, or pleurisy, or erythema, or purpura a distinctive and convincing note of rheumatism? Or, on the other hand, may any or all of these, and perhaps two or more of them in association, arise quite apart from the agent which produces rheumatic fever? And if this latter possibility is allowed, is there any available clinical method by which the rheumatic can be distinguished from the non-rheumatic variety of each of these conditions? Personally I have endeavoured elsewhere * to prove that even the eruption of subcutaneous fibrous nodules is not a purely rheumatic process, and I am inclined to put the other members of the series, including chorea, in much the same position.

Instances of this last-mentioned condition are not infrequent quite apart from the ordinary incidents of rheumatism, and the attack may recur on several successive occasions without the appearance of any such incidents. The same, I take it, is true of tonsillitis, of purpura, of epistaxis, and especially, perhaps, of erythema nodosum. But with this it must be admitted that a record of rheumatic incidents in early life may easily be overlooked, and further, that, at least so far as I can judge, there are no confident grounds on which a distinction can be established between the rheumatic and the non-rheumatic (if such there be) varieties of these conditions when any of them occur detached from the common and ordinary signs of rheumatic disease. It is possible, moreover, to carry this critical inquiry a stage further, and to ask whether, what may be called the central facts of acute rheumatism,

* 'Rheumatism, Rheumatoid Arthritis, and Subcutaneous Nodules' (J. & A. Churchill).

invariably deserve that diagnosis. Is arthritis, or pericarditis, or endocarditis, or pyrexia, or all these in combination, definitely and distinctly rheumatic when occurring apart from an obvious and unquestioned alternative explanation? And if not, how is it possible to be sure clinically that any single event or series of events is essentially a manifestation of rheumatism? As an exercise in criticism all this may be allowed, and it may even be admitted as possible that so-called typical rheumatic attacks may in different cases be due to different agencies. Yet it remains true that clinical experience gives us a group of cases of the natural history of which we can speak with confidence in reference both to the risks they entail and the manner in which these risks may be met. Individual features which mark the symptomatology of this group may arise independently, and may then be other than rheumatic in nature and origin; and time may show that some of the so-called distinctive cases may be the outcome of causes different from the influences responsible for others. Yet the term rheumatism may claim a confident clinical justification, and there is no necessity to await its application to many clinical events until proof has been afforded that these events are an expression of the same influence as that which is operative in the most secure of all rheumatic manifestations, namely, the rheumatic fever of adult life. At the same time, it may be suggested that there is sometimes too ready a disposition to label as rheumatic individual facts the interpretation of which is not obvious, and further, that we must sometimes be content, here as in other departments of practice, to recognise the impossibility of holding an unhesitating view. So long as we are not in a position completely to define and to isolate the cause of an associated group of clinical phenomena the process of diagnosis must be something less than exact demonstration. This is the position in regard to many of the alleged expressions of acute rheumatism in childhood, and thus, however confident we may be in the diagnosis of individual cases,

the definition of large general proportions is an invitation we may feel unable to accept.

Turning now to the questions that arise in connection with treatment, we find that these in some respects are allied with the discussion of diagnosis. Thus, if certain symptoms are an evidence of rheumatism, and if the salicyl compounds are, as some assert, a specific against the rheumatic poison, is the administration of these compounds the appropriate medicinal treatment? And is such treatment successful? There can be no doubt that these remedies relieve pain and reduce temperature, especially in cases where the joints are affected. But have they any considerable range of value outside these cases? More especially, does their administration prevent cardiac complications? And is it possible that the depressant action often charged against sodium salicylate has been mistaken for the direct influence of the rheumatic poison on the cardiac muscle? Again, is it necessary to give such large doses, say hundreds of grains of sodium salicylate in the twenty-four hours, as are advocated by some physicians? And what is the value of a similar heroic medication in cases of chorea? My own experience prompts me to use salicin, and, for the most part, in moderate doses, and I confess to a fondness for the organic salts of potassium or sodium, pushed so as to make the urine alkaline, and combined with quinine in doses of two grains or so; and this latter mode more particularly in cases where the temperature is sub-febrile and the pains more or less vague and generalised. Regarding the prevention of cardiac disease there will be no question that early and prolonged and complete rest is the most efficacious agency. It will be interesting to hear what is the verdict members of the Society will express on the use of small blisters and the administration of sodium iodide in the treatment of endocarditis, as advocated by Dr. Caton. Certainly under this treatment pericardial friction often promptly, and apparently permanently, disappears. But here we are dealing with a condition which exhibits these

evanescent features even apart from treatment, and it is thus difficult to be sure that remedies when administered are responsible for the change. Still more difficult is it to convince oneself that this, or indeed any form of medicinal treatment, can prevent or remove endocarditis. Personally, as opportunity offers, I follow the lines suggested by Dr. Caton, but I remain entirely uncertain of their efficacy.

There are other questions arising in connection with the salicyl compounds. First, does a good result following their administration prove that the disease under treatment is really rheumatism? Secondly, are they ever responsible for such symptoms as epistaxis and hæmaturia? These points have excited much difference of opinion, and it would be of value to know whether they can be confidently and definitely settled.

Lastly, in connection with treatment, arises the question of prevention. The necessity of providing early rest for the slight ailments of rheumatic children, and the means by which this is to be secured, I have already considered. In addition, it may be asked whether there is any reasonable ground for the statement that by attention to the hygiene of the mouth, and by removal of enlarged tonsils and adenoids, a probable avenue of rheumatic infection is closed. These measures may be wise for various reasons, but does their adoption lessen the incidence of rheumatism? I find myself unable to express any positive conclusion on this matter. Once more, are there any specific measures in relation to clothing, domestic hygiene, and climate, which are valuable in the direction of prophylaxis? Certainly the amount of suffering and the fatal issues for which rheumatism in childhood is responsible, urge more attention to the question of prevention than it has, perhaps, hitherto received.

In all this, as I am fully aware, I have proposed more questions than I am able to answer, but I may plead that my function here, as determined by the Council of the Society, is rather to suggest various points for discussion

than to attempt an exhaustive examination of any individual issue.

(*Read at the Provincial Meeting at Bedford, June the 15th,* 1907.)

Discussion.

The Chairman (**Dr. R. H. Coombs**) (Bedford) (introduced), when calling upon Dr. Hawthorne to read his paper, expressed his appreciation of the honour of being placed in the chair. Those connected with the County Hospital, Bedford, were naturally proud of the uniqueness of the institution, and the way in which everything was set out, and if the formal meeting turned out to be as successful as the wealth of clinical cases, pathological specimens, microscopical slides and skiagraphs which had been provided for them prior to its commencement, he thought members of the Society would congratulate themselves on having come to Bedford.

Dr. William Ewart divided the disease into ætiology and treatment. As to the first the author had shown that we were still in the dark. It seemed as if the fact that the child did not have arthritis, but the adult did, must have some basis other than the presence of the poison, admitting the bacterial nature of the disease; and one was led to inquire as to the differences in the structure and function of the child as compared with the adult. He wished to throw out a suggestion which at present had some demonstrative basis, that there was a progressive change and development going on in the lymphatic system, and that that system was not the same in the child as in the adult. Along those lines he thought there might be developed some guiding ideas of research. In regard to tubercle, he had heard from observers abroad and in this country that tubercle injected into the intestines of young animals did not react in the same way as it did in older ones. And it was conceivable that the glandular condition of early childhood was less prone to favour retardation in the joints, and that the child would rid itself of the disease in the joints and it would find a seat elsewhere. But what interested him most was prevention and treatment. As a profession, and as the caretakers of the children, it behoved them to frame some practical line of research; they must not be content with recognising that they did not know. He rather differed from Dr. Hawthorne as to the ability to cope with endocarditis. If he admitted his inability to cope with that his office as physician was gone; and he did not recognise that. Endocarditis was like any other inflammation, and if other inflammations could be influenced by treatment, as he contended

they could, why not also that of the heart? Most inflammations were microbic, and the profession had faith in certain big remedies before the microbic nature was recognised. He urged that they should go straight ahead and deal with the effects of the inflammation, and purge the microbes away, if possible. If such a virulent poison as erysipelas could be brought down by the application of leeches in the affected area, and the administration of calomel and antiphlogistic remedies, with iodide of potassium, surely, if steadily pushed, it should do good in endocarditis. In the case of erysipelas, in spite of the known presence of the microbe, there was demonstrative evidence of real benefit; and in the last three cases he had there was a turn for the better on the third day. The blood should be purged of the fatal effects of the microbe of endocarditis. He desired to encourage his *confrères* to take action in that regard, and if they could suggest to him a better line of treatment he would gladly accept it. Where there was a tendency for the deposition of fibrin on the valves he did not give food in the first two or three days, and later he did not give milk because it supplied fibrin. He gave a little support by means of spirit where necessary.

Mr. George Pernet said he was sorry that more physicians did not seem inclined to discuss the subject. Dr. Hawthorne had referred to salicin. As a dermatologist he had used salicin for a number of years, and in large quantities. Not long ago one patient was getting as much as sixty grains three times a day. He was not in bed, but about the ward; the case was a dermatological one. He had seen practically no ill-effects from its use, though his experience extended to hundreds of cases, and he was surprised it had not been more pushed in the treatment of subacute rheumatism. In one case only had he seen an erythematous rash which could be put down to the use of the drug. Children would stand ten grains of salicin three times a day for a commencement, as out-patients, and it was safe to go up to fifteen grains and more, under observation, of course. It was safer to handle than salicylate of sodium.

Dr. Charles W. Chapman said he thought the condition of the tonsils in that affection was very important. Follicular inflammation of the tonsils was often allowed to go on, though there was a discharge, and it was a most serious thing to abstain from removing such tonsils, or at least not to have the crypts burned with the galvano-cautery. The tonsil was probably the centre of poisoning in many rheumatic attacks.

Mr. Milner Burgess (Harlesden) said that in his experience of thirty years, acute rheumatism in childhood was very uncommon in middle-class practice, and so also was chorea. He lived in a bracing North-London suburb, with a heavy clay soil. Follicular tonsillitis was very common in children, and he looked

upon that as acute rheumatism, and a cause of cardiac disease. In the past he treated such cases with chlorate of potassium, but there were other cardiac complications, for which the drug was not responsible. He believed cardiac disease in childhood, which was not congenital, was due to rheumatism, and if he could afford it he would have bacteriological examinations made in all cases of follicular tonsillitis in childhood. He had never seen an epidemic of acute rheumatism in childhood, but he recollected one in adults. He would like to hear whether members thought acute rheumatism was an infectious disease: whether there were such things as "rheumatic houses." He wished to lay stress on the importance of rest in acute rheumatism in childhood, and he thought that warmly-dressed children did better than those which were allowed to run about in a half-naked state. He had given large doses of salicylate of sodium, but had always combined it with bicarbonate of sodium, and he had never had any bad effects. He laid great stress on the removal of adenoids and inflamed tonsils.

Dr. Alexander Morison thanked Dr. Hawthorne for his suggestive paper. He had asked many questions which he, Dr. Morison, did not think any member could answer, any more than the author who acknowledged he could not. If one could look forward to that happy time when one would be able to abolish all the consequences of acute rheumatism, it would be a matter of great moment to the race. But even when the cause of acute rheumatism was discovered he questioned whether they would be able to abolish all those secondary septic conditions which gave rise to such complications as heart disease. Some of them could remember when salicin was not used, and most were old enough to know that salicin was not now used as much as it formerly was. The reason for that he could not imagine. Before the salicin period, six weeks in blankets was the usual experience. Since salicin in its various forms had been introduced there were two classes of case distinguishable: one which promptly subsided, and another which, while relieved of some of its inconveniences, gradually developed into another type of disease as he considered—*i. e.* an initial rheumatism which was manageable by salicin, was followed by a condition over which salicin had very little control. He was not prepared to say that they were continuations of the same process. Nor did he consider, notwithstanding the good bacteriological work which had been done, that they were any nearer the essential cause of rheumatism than twenty years ago. It was known that certain organisms had been found under these circumstances, and he wished to pay the highest respect to the researches which had resulted in the discovery of a certain diplococcus as a possible cause of the condition. But he thought it was unproved that the body which had been so described was an organism *per se*;

that it was not, indeed, a portion of streptococcus of some form. He thought the future would show that there were many organisms capable of causing secondary septic consequences, such as had been described as following the invasion of that particular organism. At present we were groping in the matter. Dr. Hawthorne's explanation of the greater incidence of heart disease in children was distinctly ingenious. There were probably other conditions, however, such as had been suggested by Dr. Ewart, as to the lymphatic activity of the child, because one had seen cases in which there had only been a history of sore throat promptly followed by pericarditis, without the slightest joint affection, in the case of children who had not been affected sufficiently long to allow activity as such to be accountable for the transference. There was no doubt that rheumatic subjects might become affected by conditions, such as erythema nodosum, but this disease was not limited to rheumatic subjects. He regretted to say he had had to deal for many years with patients before he began to see daylight through the affection known as erythema nodosum. Questioning the relatives of the patient, or the patient himself when old enough, would elicit the fact that ten days or a fortnight before the erythema nodosum appeared there was in many cases sore throat or nasal discharge, or some evidence of pharyngeal inflammation dependent on some organism. He had so often found that to be the case that he looked upon the interval as an incubation period. Erythema nodosum appeared on the shins, and so attracted attention to itself, because the skin there was tense and tight, and the sore place was soon discovered. He suggested that erythema multiforme was only another variety of erythema nodosum, and that it was dependent on a similar condition. Some time ago he met a gentleman in consultation over a case which had erythema multiforme, with a temperature of 102° F. The physician in question had never seen a similar case before, and he, Dr. Morison, had never seen so extensive a one. He remarked that he felt sure the patient had had sore throat a fortnight before. The reply was that there was no history of it; but the question was put to the patient, and she said that three weeks previously she had had the worst sore throat she remembered. He thought all would agree that treatment by salicin was most important. Dr. Maclagan, in his memorable book, published certain temperature charts showing a definite fall on a certain day, and the temperature remaining down. In twenty-four hours Dr. Maclagan used as much as an ounce of salicin. No doubt there was a certain type of case which salicin given in that way could abort, so that high temperature did not persist more than three or four days. He, Dr. Morison, had long given up using blisters; he regarded them as an unnecessary inconvenience, and especially irritating to the child's

skin. He had never seen blisters do any good, and the cases of endocarditis which recovered would, he believed, have done just as well with a pad of cotton-wool on the chest. Opium was of use in some cases, especially where there were secondary complications and where salicin and digitalis were useless, as they usually were in continued cases. One had a traditional objection to using opium for children, and under ordinary circumstances children could not take it well. But if the child had an excited cardio-vascular system associated with a widely-dilated pupil, there was a "physiological belladonna" manifested by the child, as he had been in the habit of calling it, which enabled the patient to stand considerable doses of that drug, and this state produced a physiological counterpoise to the over-action of opium.

Dr. A. C. Hartley (Bedford) (introduced) said that formerly one believed that a clay soil, and living on the banks of a river, such as the Ouse, was conducive to rheumatism, and that, therefore, one might expect to find many cases of that disease in a town like Bedford. He had, on the contrary, however, during the fourteen years he had lived in Bedford, come across very few cases of rheumatism compared with the many cases he had seen while residing in a colder and more bracing climate. So his faith in the old belief had been much shaken. Reference had been made to the use of salicin and salicylate of sodium, but no stress had been laid on the important point that they must be used over a long period, long after all trace of fever had disappeared. When the temperature fell there was a temptation to drop the salicin and give tonics, and then probably there would be a recrudescence of symptoms. He found that to keep on giving salicylates for a fortnight after the disappearance of symptoms did much good, and at least it prevented the recurrence of the attack.

Dr. G. A. Sutherland asked particularly about the cardiac cases of rheumatism, where the disease, as shown by the temperature, ran the ordinary course, but in which a slight murmur persisted for some time. The patient was kept carefully in bed, and later the murmur disappeared gradually. Then the patient was allowed out of bed, and the murmur was said to come back, and so the patient was put back to bed, and kept there for an indefinite time owing to the presence of that murmur. What were Dr. Hawthorne's views about the treatment of such a patient? He (Dr. Sutherland) thought it was a mistake to prolong rest in bed in those cases. Fibrosis had taken place, and probably all the active disease had passed off. He was assuming that there had been no relapses of the acute illness. He thought it important that there should be a clear expression of opinion on that point. In another class of case the patient was suffering from progressive cardiac disease, with persistently

recurring attacks of subacute rheumatism, pain, erythema multiforme, nodules, or some other rheumatic manifestation. His experience was that those cases were very difficult to cure, whether by salicylates, or by any other line of treatment. There probably was some persistent source of infection concealed about the child's system. One of the symptoms was progressive anæmia; the patients seemed to go downhill steadily, and one recognised that they would die in two or three years, whatever was done for them.

The Chairman (**Dr. R. H. Coombs**) (Bedford) (introduced) said he was taught in St. Bartholomew's Hospital, long before salicin or salicylates came up, that purgation was an exceedingly useful and reliable method, and his old teacher, Dr. Andrew, said to him many times in the wards that he was certain that acute rheumatism could be cured by purgation, though he agreed it was a severe method and not likely to be popular with the patient. Probably Dr. Ewart's contention coincided a good deal with that theory, and he took it that that gentleman would apply some of the older and more severe methods. He thought sufficient attention was not paid in the treatment of acute rheumatism to what the older teachers used to call the *primæ viæ*. And some of the theories as to it being an auto-intoxication seemed to merit more attention than was being paid to them. He, personally, laid great stress on the importance of purgation in acute rheumatism.

Dr. C. O. Hawthorne, in replying on the discussion, said the contributions to the discussion had certainly been both of value and interest, and the recital of views based upon personal experience commanded and ought to command general attention and respect. In replying to the more contentious remarks, he would first endeavour to satisfy Dr. Sutherland. When that gentleman conceived that he had a certain duty to perform, no amount of tenderness for a colleague would persuade him to shirk it. Therefore one was not surprised to find that, impelled solely by a sense of duty, he was determined to put the opener of the discussion to the torture. The first question was whether a patient should be kept in bed three or four months on the suspicion of the presence of organic cardiac disease. His experience in that matter coincided largely with Dr. Sutherland's. If he made up his mind that mitral disease was undoubtedly present, he was averse to requiring a long course of rest. He hesitated as long as there was any doubt, and then insisted on the policy of rest, but not otherwise. In regard to cases in which rheumatism lingered on with a little pain and temperature recurring again and again, he would commend the virtues of alkalies, which, however, were not usually pushed sufficiently. In giving them he was never satisfied unless the urine showed a distinctly alkaline reaction; he increased the dose until that

effect was produced and maintained. The quantity needed to bring this about varied in different individuals. It was interesting to hear that Dr. Ewart, with his long experience of remedies, became more and more optimistic in reference to their action; whether that optimism was the result of native constitution, or of a special experience, he could not say. But though he (Dr. Hawthorne) was not a pessimist, still less a nihilist, in reference to therapeutics, he was not quite able to rise to the level of Dr. Ewart's optimism. Dr. Ewart's suggestion in reference to the lymphatic system carrying the poison more rapidly away from the joints in children was an interesting one, and would doubtless be borne in mind. But the substance of the treatment of endocarditis mentioned by Dr. Ewart was the old antiphlogistic treatment, and one was led to ask why it had fallen so much into disuse? Was its disappearance the result merely of prejudice, or was it that the old methods had been proved to have been unsuccessful? Again, was there any remedy more successful in reducing temperature in rheumatism than salicin? Yet were the members of the Society ready to say that salicin prevented cardiac complications? It might be so, but many cases so treated developed cardiac complications. He had been glad to hear Dr. Ewart's convictions, and would adopt his ideas when opportunity offered, though he confessed he would not apply to them the light heart which Dr. Ewart seemed to have in the matter. Mr. Pernet's remarks constituted a contribution of much value, and showed conclusively that large doses of salicin could be administered without doing harm. He understood Mr. Pernet to say that very little had been written about the virtues of salicin in the treatment of rheumatism. But surely that was a mistake. We owed salicin to Maclagan, and all would agree with Dr. Morison in the eloquent tribute he had paid to Maclagan's memory. Dr. Maclagan made one mistake—he was too successful; his remedy was so useful that everybody at once agreed that it was the right thing. If he had been wise, he would have arranged for some of his friends to contest the claims made for it, and then perhaps his work would have been remembered, whereas it seemed to have been largely forgotten. Concerning the discussion as a whole, it might perhaps be justly said that no particular point had been settled, but it had at least justified the position of those who took up an agnostic attitude, and it was not unimportant in the practice of the profession formally to mark the limits of confident knowledge. There were so many influences, social and professional, which provoked the expression of confident opinions, even when the amount of available evidence was small, that it was well on particular occasions they should feel free to acknowledge their inability to profess any definite view on questions that might be important both in their doctrinal and practical relationships. He was much indebted to

the Council for the honour they had done him in asking him to open the discussion, and to the meeting for the patience with which they had listened to his remarks.

107. CEREBRO-SPINAL MENINGITIS.

By EDMUND CAUTLEY, M.D.

All cases of meningitis are, to a certain extent, cerebro-spinal, but the degree of spinal extension is very variable. Strict examination shows that the cortex of the brain is also involved, and that meningo-encephalitis of the brain and spinal cord is the most accurate, though unwieldy, name for the disease.

The division into meningitis of the convexity and meningitis of base is of little value, for both are frequently involved. Nor is it much use talking of primary and secondary varieties, since the source of infection may be easily overlooked. The most practical classification is based on the bacteriological findings. Thus we may subdivide these cases into three main groups:

(1) Tuberculous meningitis.

(2) Septic or suppurative meningitis, including those due to the pneumococcus, streptococcus pyogenes, staphylococci, and numerous other organisms.

(3) Cerebro-spinal meningitis, which may be epidemic in character, sporadic, or of the type known under the names of post-basic, simple or posterior basal meningitis of infants, chronic basilar meningitis, or the cervical opisthotonos of infants.

In order to estimate the frequency of the different varieties I have looked through the notes of the last 125 cases which have been under my care in children under ten years of age. I have left out of consideration those cases in which meningitic symptoms occurred as part of influenza and other diseases, ending in recovery, on

account of a certain element of doubt in the diagnosis. In most of these 125 cases the diagnosis was confirmed by the results of lumbar puncture during life or by post-mortem examination. The statistics must not be accepted as absolutely accurate, for different pathologists may vary in the importance which they attach to the presence of muco-pus in the middle ear, and they may even make mistakes in determining the variety of micro-organism present in the cerebro-spinal fluid and exudates. Only those cases in which there was no element of doubt about the existence of ear disease have been ascribed to that cause. I am convinced that ear disease is not nearly as frequent a cause of meningitis in early life as is commonly supposed. The presence of the pneumococcus in the middle ear and in the cerebro-spinal exudates by no means proves that the meningitis is secondary to the ear mischief. In the great majority of such cases I believe that the ear trouble is part of a general blood infection or is due to extension from the meninges. A history of injury is not infrequent in cases of meningitis, but in only two could I definitely ascribe the disease to the injury. A boy recovered from meningitis secondary to a blow on the head by a cricket-ball. A girl died as the result of a fall on the head.

Of the 125 cases 71 were diagnosed as tuberculous: males 38, females 33. Of these 54 were verified by post-mortem examination.

Cerebro-spinal meningitis was diagnosed in 36 cases: males 17, females 19. The diagnosis was verified post-mortem in 20 out of 24 which ended fatally, and in some of the others by lumbar puncture during life.

Pneumococcal meningitis proved fatal in 10 out of 11 cases: males 8, females 3. In all the diagnosis was confirmed at autopsy.

Two boys and 3 girls died from meningitis secondary to ear disease.

No less than 111 died and the diagnosis was verified post mortem in 88 of them. The sex incidence showed a total of 66 males to 59 females.

Certain observations on the age-incidence are of value:

Age Incidence.

	0-6 mos.	6-12 mos.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.
Cerebro-spinal . . .	15	11	4	3	2	0
Pneumococcal . . .	5	3	2	0	1	0
Tuberculous. . . .	3	7	16	13	10	5

No less than 26 out of 36 cerebro-spinal cases occurred in infants under one year of age, and only one was over four years old. The cases were more numerous during the first than the second six months of life. The youngest child was fourteen days old at the onset.

Pneumococcal meningitis shows a similarly marked preponderance in frequency during the first year of life, 8 out of 11 cases occurring at this age. The youngest of these died on the third day of life.

On the other hand tuberculous meningitis is most common in the second year, and occurred with about equal frequency in the first, third, and fourth years, and was much less common after the fifth year. Of the 71 cases 54 were under five years of age. Two thirds of the cases in the first two years of life were from six to eighteen months of age.

Hence we may conclude that meningitis during the first six months of life is most commonly non-tuberculous; in the second six months it is non-tuberculous in about two thirds of the cases; and that after the first year the tubercle bacillus is by far the most common cause. The youngest child with tuberculous meningitis was three months old. Of the cases due to ear disease two were in their second year and three were between six and eight years old.

The *seasonal incidence* of tuberculous meningitis was

about the same in each of the four quarters of the year, but there was some preponderance in the months of June and July, 19 out of 66 cases beginning in these months. The cerebro-spinal cases showed no special seasonal incidence. In each of the months of May, August, and December there was 1 case; 2 in June; 3 each in February, September, and November; 4 each in January, March, July, and October; and six in April. Half of the 36 cases have been seen in the last two and a half years; 4 of them in this year. Out of 9 cases in 1905, 2 occurred in one month and not more than 1 in any other month. There was nothing in the monthly incidence of cases to suggest that the disease was becoming epidemic, and there is no indication at present of the beginning of an epidemic in London.

Pneumococcal meningitis is fairly common in infancy. It is usually secondary to bronchitis, broncho-pneumonia and pneumonia, empyema and other lung diseases, and even to acute pneumococcal endocarditis. The association with pneumococcal infection of the middle ear has already been referred to. Primary cases have been recorded. In 1903 I reported one at a meeting of this Society ('Reports,' vol. iii, p. 318). The fever ran a course like that of acute lobar pneumonia and ended by crisis. The pneumococcus was obtained by lumbar puncture. Capter ('Medical Record,' 1905) reported three cases, the pneumococcus being found in the cerebro-spinal fluid. This variety of meningitis is usually severe and rapidly fatal, though occasionally it is mild. Sometimes it is latent, not suspected during life, but found extensively distributed after death. The exudation is apt to form a thick layer over the convexity, and is rarely or never limited to the base of the brain.

Streptococcal meningitis is usually due to ear disease or pyæmic affections. The streptococcus comes, in frequency, next to the pneumococcus as the cause of acute meningitis especially affecting the convexity of the brain. The exudate is very like that due to the pneumococcus, but, if

secondary to ear trouble, it may be somewhat unilaterally distributed.

Cerebro-spinal meningitis.—Next let us turn to the consideration of those varieties of meningitis which I have included under the name of "cerebro-spinal meningitis," and the relationship which they bear to each other.

The epidemic variety has a remarkable preponderance in early life. In some epidemics as many as 90 per cent. of the patients are under fifteen years of age.

It is seen in two distinct forms, the toxæmic and the meningitic, and we must consider how far sporadic cases and those of post-basic meningitis in infancy conform to these types. We must also study the bacteriology of these different varieties, and the clinical course and sequelæ.

In the toxæmic type the symptoms are those of profound blood-poisoning. The attack is fulminating or malignant, and perhaps associated with a purpuric rash. Hence the disease is called "spotted fever" or "malignant purpuric fever." Purpura is by no means a constant feature, being present in 10 per cent. or less of the cases. The onset is usually acute, with headache, chilliness, and convulsions, great depression and rapid development of a state of stupor, coma, or delirium. Coma may ensue in a few hours. Severe cases occur sporadically and may be identical in character with those of the epidemic type, whether toxæmic or meningitic. Thus a well-nourished, breast-fed child, aged 4 months, had pain in the stomach, became feverish, and in a few hours exhibited purpuric spots, retracted head, and a stuporous condition. Death ensued within thirty hours from the onset.

Another child, aged 18 months, complained of pain in the ankle, and in a few hours was seized with convulsions and high fever. The fits went on for nearly twenty-four hours and the child was almost moribund, with all the symptoms of profound toxæmia, notably extreme dyspnœa, rapid and thready pulse, and high fever. Recovering from the convulsive seizures he developed the characteristic signs of basal meningitis, had a markedly hectic tem-

perature for over a month, and eventually recovered completely, except for the loss of an eye from metastatic choroiditis or pseudo-glioma. In comparison with this case I may mention that shortly afterwards I had under my care a typical case of post-basic meningitis in an infant, who also developed a similar affection of the eye, rapidly wasted and died.

Just as severe sporadic cases may occur which are indistinguishable clinically from those occurring in epidemics, so in the course of an epidemic mild cases are seen which, in the absence of an epidemic, would be diagnosed as post-basic meningitis. In other words there is no dividing line which enables us to separate these varieties. The meningitic type of the epidemic variety is similar to the ordinary post-basic meningitis clinically in its course, complications and sequelæ, and pathologically.

The only distinction between these affections lies in the epidemic character and the virulence. It might be urged, as a distinctive feature, that the sporadic cases and those of post-basic meningitis are not infectious or contagious, but we have little proof that the epidemic variety is spread by direct infection; several members of a household may be attacked, but it is obvious that they are living under similar conditions. The same remark applies to outbreaks in barracks, schools, etc. For comparison I may refer to outbreaks of pneumonic fever under similar conditions. In fact, some epidemics of meningitis appear to be due to the pneumococcus. Sporadic cases even of a virulent type do not act as foci of infection. Hence, if the disease is contagious, it must be due to some special virulence of the infective agent, increased by concentration of the poison and lowered vitality of the subject, as in typhus fever and pneumonia. It is stated that in Philadelphia infection spread to and killed a doctor, and that in the epidemic in 1904 in New York it spread to several nurses. The course of the disease may be divided into three stages, with approximately definite pathological changes and associated clinical symptoms.

In the first stage there is intense congestion, sometimes hæmorrhagic, of the pia-arachnoid and grey matter of the cortex. To this are due the headache, convulsions, vomiting and mental state. In the second stage there is exudation of lymph or pus between the pia and arachnoid, with accumulation in the sulci of the cortex, the lymph cisterns at the base of the brain, the subarachnoid space of the spinal cord, and, by extension through the foramen of Magendie, the ventricles of the brain.

In the third stage the accumulation of fluid causes hydrocephalus and symptoms thereof, namely, continued retraction of the head, vomiting, swollen discs, tense fontanelle, separated cranial sutures, spasmodic retraction of the upper eyelids, and impaired cerebral function. The fluid is not necessarily purulent or even sero-purulent. In mild cases it is constantly quite clear. Probably almost all cases of hydrocephalus in infants are secondary to a past mild, and perhaps unrecognised, basal meningitis.

It is not necessary to enter fully into the symptomatology, but certain symptoms deserve a little consideration.

In all types the onset may be sudden or gradual. It is more often sudden than gradual in the epidemic type, while the reverse holds good for the sporadic cases and those called post-basic.

Headache is much less common in children than in adults, and is by no means a characteristic sign in infancy. This probably indicates that the headache is due to increased tension rather than to actual encephalitis. Rigidity of the neck muscles and retraction of the head are most constant signs. Herpes, usually on the fourth day, is common in the epidemic type, and may occur in as many as 20 per cent. Conjunctivitis is not uncommon.

The rigidity of the neck muscles and retraction of the head are signs of meningeal inflammation, and are developed in order to prevent movement of the meninges. Besides being common early symptoms, they are usually the last to disappear, though they may vary in degree from day to day.

If the inflammation has spread down the cord Kernig's sign is likely to be present. Stretching the sciatic nerve, evolved in the process of eliciting this sign, causes movement of the spinal meninges. It is less often present in tuberculous than in other varieties of meningitis.

Vomiting is more common in this variety than in tuberculous meningitis, and so, too, is diarrhœa. The vomiting may be continuous throughout, or may cease as the child improves, reappearing with relapse or with the onset of hydrocephalus. The bowels are very rarely constipated, whereas constipation is a common feature of tuberculous meningitis.

The pulse rate is increased in frequency, especially in severe attacks, and in late stages it may become irregular and infrequent on account of hydrocephalus. In tuberculous meningitis, on the other hand, a slow, infrequent and irregular pulse is common in the early stages, and considerable increase in frequency is a common sign of an early termination.

The respirations present similar differences, and vary with the degree of toxæmia. The temperature is most variable, but usually runs a higher course and is more hectic in type than in the tuberculous affection. As a rule it ranges from 101° F. to 105° F., and may become hyperpyrexial, though ante-mortem hyperpyrexia is by no means as common as in the tuberculous form. The temperature is not of very great value in diagnosis or prognosis. It may continue hectic for two or three months, yet terminate in recovery. A falling temperature is a favourable sign, if it is associated with cessation of vomiting and increase in weight. Otherwise it may indicate commencing hydrocephalus.

Lumbar puncture may yield evidence of absolute diagnostic certainty. In tuberculous meningitis the cerebro-spinal fluid is clear, and may contain an excess of lymphocytes and perhaps tubercle bacilli. In cerebro-spinal meningitis it is likely to be cloudy, and contains an excess of polymorphonuclear cells and the meningo-

coccus. In the hydrocephalic stage the fluid may be indistinguishable from that of the tuberculous disease.

In the diagnosis of meningitis we have to remember that the acute onset with vomiting and cerebral symptoms may be mistaken for that of acute infectious disease, and that meningitis is frequently diagnosed when it does not exist. Scarlet fever, pneumonia, influenza, and typhus are the chief diseases likely to be mistaken for it at the onset. Prolonged febrile cases, with slight meningitic signs, may simulate typhoid fever. Retraction of the head may also occur from reflex causes, from inflamed cervical glands, post-pharyngeal abscess, and cervical caries. By itself it is not diagnostic. The importance of the differential diagnosis of the variety of meningitis lies in the fact that tuberculous meningitis may be regarded as invariably fatal, whereas other varieties offer a fair prospect of recovery.

The chief diagnostic points on which to lay stress are the age, mode of onset, character of pulse, respiration and temperature, the vomiting, diarrhœa or constipation, retraction of the head, degree of irritability, optic neuritis, herpetic rash and purpura, Kernig's sign, the results of lumbar puncture, and the duration. The meningococcus is found in all the varieties included under the head of cerebro-spinal meningitis. It is a markedly intra-cellular organism, staphylococcal in character, and Gram-negative. Under the microscope it is seen in pairs, tetrads, as single cocci and in groups. Its vitality is low. It will not grow below 25° C., and is rapidly killed by drying and sunlight. It grows best on nutrose ascitic agar, forming in twenty-four hours at 37° C. smooth, moist, grey, translucent, circular or oval colonies with regular outline. Flexner states that its vitality is increased by adding calcium carbonate to the medium. And according to W. H. Park it is more readily cultivated if sheep serum is used instead of human serum.

Its virulence is variable and usually low. The poison is intra-cellular. The disease can be readily induced in monkeys by lumbar puncture and injection, and the

exudation is uniformly basal, and rarely on the vertex. The inflammation extends to the ethmoid bones and nasal fossa (Flexner), and this fact may be adduced as an argument against the theory of nasal infection.

The organism has been found by Elser (1905) in the blood in ten out of forty-one cases, and its presence in the blood is of very bad omen. It has been found in all forms of the cerebro-spinal meningitis, whether epidemic, sporadic, or post-basic. Slight differences are sometimes noted, but I have little doubt that these are insufficient to warrant them being regarded as different organisms. Occasionally other organisms are also found, alone, or in conjunction with the meningococcus. Thus, I have found it in a case of tuberculous meningitis. An organism called the Diplococcus crassus was found in some of the cases of the Silesian epidemic. A Gram-positive organism has also been found.

The meningococcus is very like the gonococcus, the pneumococcus, and the Micrococcus catarrhalis commonly found in the nose. From the latter it is distinguished by being smaller, and by the fact that it produces an acid reaction in glucose and maltose media. According to some observers acid fermentation occurs in galactose and saccharose media, but this is denied by others. v. Lingelsheim ('Deutsch. med. Woch.,' 1905, No. 26, p. 31), isolated seven Gram-negative cocci from the naso-pharynx in the course of the Silesian epidemic.

Treatment.—Assuming the possibility of nasal infection it is advisable to disinfect the nose as a preventative measure. The organism was found in the nasal secretion in 23 per cent. of 635 cases in the Silesian epidemic. It is rapidly destroyed by 1 in 800 carbolic lotion. In Vienna a liquid containing "Pyocyanase," a preparation from the Bacillus pyocyaneus, is used as a spray, douche, or for swabbing the nose and naso-pharynx. According to Jehle's experiments it destroys the meningococcus in forty-eight hours. Good hygiene, especially ventilation, and liberal diet are most important.

Ruppel's serum, in doses of 5 c.c. *sub cutem*, has been given as a protective, and in doses of 25 c.c. is given to cure the disease. It was used by Robb, of Belfast ('British Medical Journal,' 1907, vol. i, p. 1120), in four cases, and all died. He gave Kolle's serum in forty-four cases and 66 per cent. died. Burroughs and Wellcome's serum was also unsatisfactory. Robb's mortality was 65 per cent. of 192 cases, all except five occurring in three months, January to April. So far the serum treatment has proved unsatisfactory, and reliance must be placed on careful feeding and nursing. Cold to the head and hot baths afford relief to convulsions, extreme opisthotonos and hyperæsthesia. Small doses of phenacetin, antipyrin, and opium are useful. Quiet and rest are imperative. Injections of lysol, 1 per cent. solution, into the spinal canal have been tried in Lisbon. The removal of fluid by lumbar puncture is distinctly beneficial if there is any indication of intra-cranial pressure. Vaccine treatment has not yet been thoroughly tried.

(*Read at the Provincial Meeting at Bedford, June the 15th*, 1907.)

108. RIGHT-ANGLED CONTRACTION OF THE TENDO ACHILLIS AS A CAUSE OF HALTING AND STUMBLING IN CHILDREN.

By A. H. TUBBY, M.S.

The condition which I am about to describe comes before us in different clinical guises, the apparent discrepancy being due to the degree of departure from the normal. I will briefly indicate to you some of the phases which are met with.

A child is brought for advice by his parents with a statement that he very soon becomes tired in walking, has pains in his calves and around the knees. He is not able to run well nor swiftly, and shortly after starting he stumbles and falls; and the scars about the upper part of

the tibiæ and over the patellæ testify to the truth of this statement.

A second type of case is seen by the surgeon, because the gait is shambling, and the child walks with short steps and the knees bent. He is found to be unable to make longer steps without bending the knees more. This child, too, is incapable of taking the same amount of walking and running exercise as his schoolfellows.

A third variety is that in which a sprained ankle is constantly occurring.

A fourth class of case, and the most frequently met with, is the child who comes to you with so-called flat feet, these members being held in an everted position. Yet if you carefully observe the feet you note that while there is undoubted eversion present the arches have not fallen. The reverse is often the case, and the arch is exaggerated.

A fifth type is the child brought to see one in consultation because he turns his toes in and walks on the outer side of the foot.

Now all these different clinical states are referable to one underlying cause. In the normally constructed individual, if the knee be fully extended, and the important point is in the word *fully*, the foot is capable of dorsiflexion, so as to make an angle of 72° with the leg, that is, 18° less than the right angle. This fact can be readily verified by measurement with the goniometer I show you. In the act of walking at one particular moment it is essential that this power of complete dorsiflexion of the foot should be fully exercised. For example, when the step forwards is being taken, presuming that the right leg is in advance, the left foot is at that moment firmly planted toe and heel on the ground, bearing largely the weight of the body. In order to give the impetus to the stride, and at the same time to maintain the weight of the body, the left knee is fully extended, and the foot is dorsiflexed at the ankle to the extent of 18° less than a right angle. If the angle of dorsiflexion be decreased the

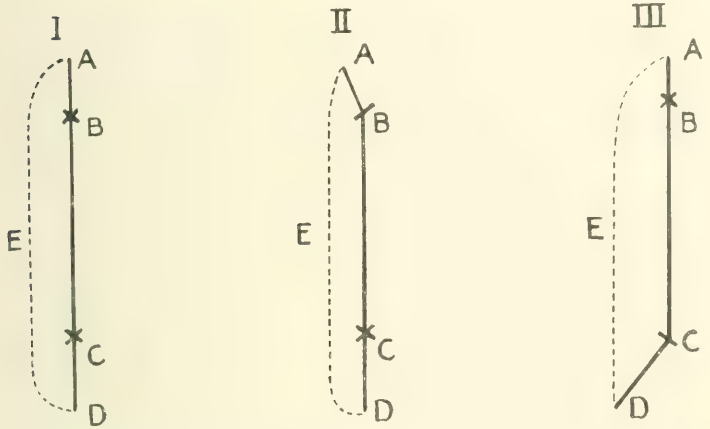

FIG. 16.—To show how the effort of compensating shortened calf muscles and tendo Achillis either by bending the knee or by inversion or eversion of the ankle is effected. A = point of attachment of gastrocnemius at the lower end of the femur. B = knee-joint. C = ankle-joint. Between B and C = tibia and fibula. D = point of attachment of the calf-muscles into the os calcis. E = dotted line representing the calf-muscles and tendo Achillis. In I the structures are presumed to be normal. In II the calf muscles and tendo Achillis are shortened and the knee is bent so as to lessen the distance A—D between the lower end of the femur and the tuberosity of the os calcis, but the ankle is neither inverted nor everted; this is drawn in an antero-posterior plane. In III, the calf-muscles and tendo Achillis being shortened, the knee is held straight, while the ankle is inverted or everted to lessen the distance A—D between the attachments of the calf muscles and their tendons; this is drawn in a transverse plane.

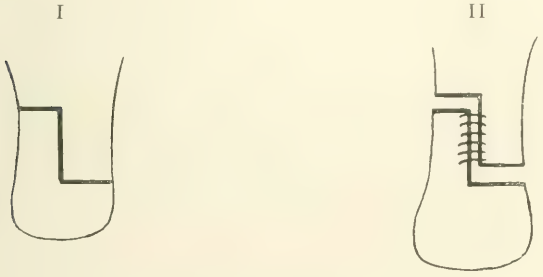

FIG. 17.—I, Tendo Achillis with Z-shaped section. II, The two portions of the tendo Achillis have been slid on each other to the required length and are united by sutures.

stride must be accordingly lessened, or the patient will be in uncertain equilibrium if he attempt to take a long step. The explanation of all the clinical phases I have described above is found in varying degrees of loss of the angle of dorsiflexion. Loss of dorsiflexion is due, in these cases, to some degree of contraction of the calf muscles and of the tendo Achillis. Clinically we find that the usual condition is that the foot, with the knee fully extended, cannot be dorsiflexed beyond a right angle. Sometimes the condition is not so marked as this, there being 5° or even 10° of dorsiflexion; but the fact remains that free movement at the ankle in the direction of flexion is limited, and it invariably produces unpleasant results.

Thus in the first type of case brought to your notice the child becomes tired because his stride is habitually shortened, and the strain upon the calf muscles and tendo Achillis accounts for the pain and weariness in those parts.

In the second type of case, the child with shambling gait, the explanation is quite obvious. If the calf muscles and tendo Achillis are too short one of two things must result if rapid progression is desired. The child must either walk partly on his toes, with the heels slightly off the ground; or bend the knees so as to relax the calf muscles and tendons, and thus obtain full dorsiflexion at the ankle.

In the cases with frequently sprained ankles the explanation is that the habit of bending the knees in walking has not been learned; and at the particular moment in striding forwards I have above indicated the foot in the rear is not planted firmly on the ground, but is in a condition of unstable equilibrium, so that if it rests on any inequality it is readily twisted inwards or outwards, and a sprain results.

In the fourth and fifth phases, the flat-footed child and the child walking with inverted feet, the mechanics are equally simple. The distance between the lower end of the femur and the heel can be shortened to accommodate the contracted structures in one of two ways, either by

turning the foot outwards or inwards at the ankle. In both cases, in place of two parallel lines, composed of the lower end of the femur, the tibia, the astragalus and os calcis on the one hand, and the calf muscles and tendo Achillis on the other, lying in the same vertical plane, a triangle is formed. The base of the triangle is the shortened muscles and tendon, the apex of the triangle is at the ankle. One side, made up of the bones above the ankle, is much longer than the other, composed of the bones below the ankle-joint.

This simple and seldom described condition of contraction may always be suspected if the heads of the metatarsal bones are found to be prominent in the soles of the feet, and is certainly present when a row of corns is found over the projecting bones. In many cases, if allowed to proceed unchecked, the condition develops into ordinary talipes equinus, about which no doubt can exist. But the object of these remarks is to insist upon the necessity of recognition and the importance of treating these slighter degrees of contraction.

A word at this point as to the method of examination of the child. He should be seated, the knee fully extended, and the foot brought into a straight line with the leg. The foot should then be slowly dorsiflexed, and the moment resistance is encountered or pain is elicited passive movement should be stopped and the angle taken by the goniometer.

Caution is necessary. No abrupt nor rough movement must be used in ascertaining the angle of dorsiflexion, or spasm will be set up in the calf muscles, and the degree of contraction will appear larger than it is. The movement of dorsiflexion of the foot should be slow, gentle and steady, and the child's attention distracted while it is being tested. The bones above and below the ankle must be held in one right line, and it often happens that one examination is not sufficient to determine the degree of the trouble nor to decide what line of treatment should be adopted. If the child is cold, frightened, or fatigued

the extent of loss of normal movement is often exaggerated. Is is advisable in many cases to see the child on a second occasion, when it has had a night's rest, and when the parts are warm. These conditions may make a difference of 5° to 10° in the estimation of the angle.

As to the cause of this right-angled contraction of the tendo Achillis, it is found to be in most cases due to infantile paralysis, the incidence of which has fallen mainly upon the anterior muscles of the leg, which have all but recovered; in fact, by the ordinary tests they appear to have entirely recovered, but it is evident that the recovery is not quite complete, or there is a slight loss of balance between the anterior and posterior muscles, as is shown by the dropping of the foot when it is lifted from the ground. If equilibrium be once disturbed the calf muscles gain a mechanical advantage and contracture follows. The difficulty of walking and the symptoms described to the surgeon frequently begin after an exanthem, such as whooping-cough or measles, which I venture to think are more often associated with neuritis of the external popliteal nerve than is suspected.

Another set of causes is associated with throat lesions, such as tonsillitis of a doubtful nature and diphtheria. And in Anglo-Indian children I am frequently told that the child has suffered from one or two attacks of "fever," whatever that may mean.

The question of treatment is sometimes a difficult one. If the foot of the fully extended limb be incapable of dorsiflexion beyond a right angle, I am convinced that the proper thing to do is to lengthen the tendo Achillis. This should not be done by simple section, as it is not easy to regulate the exact length of the band of new tissue between the severed ends of the tendon. It is difficult to prevent the parts healing with too long a union, so that talipes calcaneus results. Therefore I practise an open operation, in which the tendo Achillis is lengthened to the requisite amount by the Z-shaped method. A transverse incision is first made half way through the tendon, and

then the knife is carried vertically downwards for a distance of a half to one inch. It is then turned on the flat, and the remaining part of the tendon cut through transversely. The two portions are slid upon one another until the requisite degree of lengthening, which can only be learned by experience, is obtained, and then they are stitched together (Fig. 17). In this way firm union is obtained, and all risk of undue lengthening avoided. In those cases where there is only a diminution of 5° or so of the angle of dorsiflexion an immediate operation is not to be advocated, but passive and active movements, designed to stretch the contracted structures, should be sedulously practised, and much assistance is afforded by prescribing a surgical boot, with an outside steel to the calf and a toe-uplifting spring, the constant action of which stretches the shortened soft tissues. If this manœuvre fails we can always resort to the simple operation previously mentioned.

When I was hill-climbing, I often wondered why guides could stand on hill-sides where I could not, and that after making every allowance for their training. I was beginning to see the reason, when Dr. Wherry, of Cambridge, brought out an interesting book on 'The Climbing Foot,' showing that the normal range of movement at the ankle of mountain climbers was 10° to 15° greater than that of town dwellers. One night in the summer, at a remote mountain inn, where there were many guides assembled, I persuaded them to allow me to measure their range of movement. In some cases I found it exceeded my own, which is normal, by 20°. Last winter I was at another mountain place in Switzerland, and was talking the point over with a public school master, when the latter said at once that it explained why some of his men could not row for long without fatigue, and he found them unable to make proper use of the sliding seat. He has undertaken to supply me with observations on the point.

(*Read at the Provincial Meeting at Bedford, June the 15th,* 1907.)

109. A CASE OF BILHARZIA IN A BOY, AGED ELEVEN YEARS.

By HENRY SKELDING, B.C.

F. F—, aged 11 years, came to the Bedford Grammar School from Umbali, in Rhodesia, in October, 1906.

He was first seen March the 2nd, 1907, when he developed measles. During the attack my attention was drawn to the very deep sleep he was always in when I called, either morning, afternoon, or evening.

The nurse told me that he was with great difficulty aroused, and that after he had taken nourishment he fell again into heavy slumber. He complained of no pain, uneasiness or inconvenience, and when he was awake was quite rational, although unless roused he appeared as if he had been drugged.

This state of torpor gradually diminished, and finally, at the end of three weeks, he regained his normal condition to a certain extent.

On the fifth day after the development of the complaint the nurse drew my attention to the condition of his urine, which was cloudy and contained a very considerable quantity of blood of a bright red colour, with little deposit. This, the first specimen, was unfortunately thrown away. The next specimen contained much less blood, but was cloudy, and had on settling a stringy mucogelatinous deposit, which on examination showed the eggs of *Bilharzia hæmatobia* in clusters and very numerous.

In the first instance I looked upon it as a case of hæmaturia due to the attack of measles, but on questioning the boy whether he had anything the matter before he came to England he said he passed some blood, but little notice was taken of it as "a number of people, especially the 'niggers,' had it." That at once suggested bilharzia to me.

Since his attack of measles he has been constantly under observation. I have noted the following: He

has a pale, leaden colour of skin, with slight flush, the skin being dry and appearing as if dusted with flour. He is unable to take any great exertion, a walk of two miles fatiguing him.

The temperature is slightly raised in the morning to 99° F., becoming subnormal at night—97° F. Every ten to fourteen days he begins to feel uneasy, the temperature rises to 100° F., and he passes more blood. [June the 15th: He has one of these attacks just now.]

When he passes urine the first is quite clear, then commences the thin streaky condition, and the last few drops are bright blood.

This condition is, I believe, symptomatic of the disease.

There is only occasionally pain, and that at the end of micturition. There has been no swelling of the feet or any rectal symptoms.

The ova are well shown under the microscope—Exhibit No. 104, specimen 8.

Mr. C. G. Johnson, who kindly examined several specimens for me, on one occasion, in a fresh specimen, saw the free embryo swimming about.

Treatment.—As little exercise as is possible whilst allowing him to resume work at school. No games, and nothing in any way to fatigue him. Light simple diet, as for mild cystitis. Under this he has much improved.

The disease is scarcely mentioned in any of the well-known works on children's diseases. There are two short accounts in Patrick Manson and Clifford Allbutt's 'Medicine.'

The mistaken idea that the embryo gets into the bladder through the penis appears prevalent, for the natives tie a string round that organ when crossing a river.

As I stated, I can find no record of definite treatment amongst children. But it seems rational to treat the symptoms as for mild cystitis, and try to prevent the sequelæ of such a condition, viz. calculus, and nephritis. The embryo is said to be more frequently found in the blood portal system.

The following remark made by Guillemard in 'Allbutt's System,' seems to warrant particular attention being paid to this disease by scientists. He says: "The prognosis is less favourable in adults than in that of boys, *and on the whole the probability is that the patient will never be a perfectly sound man again.*"

(*Read at the Provincial Meeting at Bedford, June the 15th*, 1907.)

110. ON ŒDEMA OF THE LIMBUS.

By HARVEY GOLDSMITH, M.D.

In the course of the past few years I have had brought under my notice not a few cases of a peculiar condition of the conjunctiva, to which the term "œdema of the limbus" may casually be applied. The cases occur mostly in children, or very young adults, and are especially common in the early summer months. A typical case presents the following features: There is photophobia, sometimes considerable, more or less injection of the ocular conjunctiva, which at the limbus is heaped up into a greyish mass, or series of small grey nodules, which occasionly completely surround the cornea; the latter is the more common condition. I have never been able to detect any loss of the superficial epithelium, and the nodules never break down as in phlyctenular conjunctivitis. With it there is invariably a granular condition of the palpebral conjunctiva, and when this is relieved by the usual treatment—*e.g.* yellow oxide of mercury or argyrol—the œdematous nodules quickly subside, unless the case has been neglected, when they may persist for months. In one case, a boy, aged 10 years, the masses were so large and persistent after I had got the lids into a healthy state that I dissected them off. The boy reappeared about a year later with the swellings again present, but not so marked as formerly, and they quickly

subsided under treatment. The occurrence and recurrence of the condition at a certain season of the year has led me to consider it a mild type of vernal catarrh.

(*Read at the Provincial Meeting at Bedford, June the 15th,* 1907.)

111. NEPHRITIS IN INFANTS.

By GEORGE CARPENTER, M.D.

Albuminuria in healthy infants during the first few days, and sometimes weeks, of life is not an uncommon occurrence. Cruse detected it 28 times in 90 observations, and his results were confirmed by Martin, Ruge and Pollack. Not only was albumin found, but also hyaline, epithelial and granular casts.

On the other hand one can affirm from one's own observations that the urine of newly-born infants is also often free from albumin and tube casts. I have found it so in many observations on one infant and in single observations on many infants.*

Since the above records were made other observers have been at work upon the subject of infantile urines.

In a paper entitled "Nephritis in New-born and Young Infants," † E. Mendi examined the urine of 17 babies from ten to forty days old and found albumin, epithelial and hyaline casts. Fourteen infants had broncho-pneumonia; 6 of them had *sclerœdema*—hardness and serous infiltration of the subcutaneous tissue more or less diffuse; and 8 *sclerema*—hardening and dryness of the subcutaneous fat. Two infants had more or less violent convulsions.

The urine in 11 cases was "not much diminished in quantity," and in 6 it was scanty, and in some led to anuria; these variations bore no relationship to the sclerœdema.

* "Notes upon the Urine of a Newly-born Infant," 'Reports of The Society for the Study of Disease in Children,' vol. i, pp. 160–163.

† 'Rivist di Clin. Pediat.,' 1903, p. 510.

Fry and Martin,* in a paper on "Infantile Nephritis," related their experiences. They examined the urines of 100 infants under three months old; three specimens were collected from each infant on different days, and the tests used were cold nitric acid, and ferro-cyanide of potassium and acetic acid. Nineteen cases had albuminuria; 6 were under ten days old, 5 were from ten days to a month, and 8 from one to two months.

Hyaline, granular, and a few epithelial casts were found in 17 of the 19 cases; but casts were found in 14 other infants whose urine was not albuminous. In 26 infants uric acid was abundant; 14 of these had albumin and casts, 1 had albumin only, 9 had casts only, and the remaining 2 were free from albumin and casts. Seven cases were examined post mortem and uric acid infarcts and parenchymatous inflammation were found. Three out of the 7 cases showed in addition interstitial nephritis. Six fatal cases had œdema of the face and extremities. These results were obtained from breast- and bottle-fed babies, and of the 19 cases of albuminuria 15 were artificially fed.

E. Bellico† examined the urines of 70 infants during the first year of life who were suffering from various complaints, and found in 23 of them renal complications. In 3 cases there was albuminuria only. In 4 he could find no albumin, but microscopically there were renal cells and tube-casts, and in 2 red and white blood-corpuscles. Apart from the microscopical evidence in these infants, there was nothing to suggest renal disease. Most of the cases occurred during gastro-intestinal disorders.

Dwight Chapin‡ found albuminuria in 75 out of 86 cases of gastro-intestinal disturbance in infants. In 15 of the cases there was a heavy trace of albumin. Esbach's test was used, which perhaps accounts for so large a proportion. In 37 there were hyaline, granular, and epithelial casts.

* 'Archives of Pediatrics,' vol. xxi, p. 19, January, 1904.

† 'Rivista di Clin. Pediat.,' 1905, No. 10, and 'Gaz. Med. Ital.,' 1905, No. 50, p. 498.

‡ "The Urine of Infants," 'Archives of Pediatrics," 1906, vol. xxiii, p. 329.

Of 16 fatal cases 14 had albuminuria, and of these 10 had casts.

In 49 out of 57 cases of pulmonary disease there was albuminuria—a heavy trace in 6. Casts were found in 32. Of 17 fatal cases 15 had albuminuria, and 10 of these had casts.

In 31 out of 45 cases of other general illnesses albuminuria was present. In 9 out of 11 cases of cerebro-spinal meningitis albumin and casts were found.

Chapin thinks that albuminuria and casts are produced by any disturbance of the bodily functions in infants, and are occasioned by congestion and irritation of the renal tubules. He attaches no special significance to the condition.

Still* found in 2 cases of infantile scurvy hyaline, granular and epithelial casts. While slight hæmaturia, if only to the extent of a few red corpuscles, is a frequent and very early symptom of scurvy in infants, I have not as yet met with evidences of catarrhal nephritis in this affection.

But these clinical observations of Mensi, Fry and Martin, Bellico, and Dwight Chapin appear to me to be somewhat remarkable in that they have found such a large percentage of infants with albuminuria and tube-casts.

In 62 cases of infants coming under my own notice, ranging in age from three weeks to eight months, and brought to the out-patient department for a variety of ailments, I found albumin in two only. One was a child, aged 1 month, brought because its mother's milk was failing. The other was aged 6 months, and pus cells and desquamated bladder-epithelium were found in the urine to account for the albuminuria. The infants examined were both breast- and bottle-fed, and they were for the most part suffering from minor ailments.

Passing now for a moment to the consideration of dropsy in infants, this is found chiefly at two periods—viz. in the

* "Nephritis in Infantile Scurvy," 'Lancet,' August the 13th, 1904, p. 441.

new-born and during the first year or so, the age of gastro-intestinal disturbance. It in no sense differs from that met with in nephritis—it may be slight and confined to the back of one hand or the dorsum of a foot, or it may be general. In the latter case the features are swollen, the eyelids closed, the extremities and loins deeply pit on pressure, and the serous cavities contain free fluid. If the dropsy be slight the skin readily pits, but if the cutaneous tissues be very distended with serum the skin is shiny, and pitting is obtained with difficulty. Such a condition in a new-born child, by reason of cutaneous hardening and consequent stiffening of the limbs, may be mistaken for sclerema neonatorum.

It has been shown by a variety of writers, by Hutinel, Barthelemy,* Follet,† Rocaz,‡ and L. F. Meyer,§ that albuminuria is rare in the œdema of infantile gastro-enteritis, and with that view I am in entire accord.

Stöltzner,‖ in a communication on "The Œdemas with Albuminuria in Young Children," arrives at the conclusions that these œdemas are found to occur after acute infectious disease, or—especially in younger children—gastro-intestinal affections. That in their occurrence and characters they imitate exactly nephritis, and when the cases are examined after death inflammatory changes are always found. But this concluding assertion is certainly too sweeping, and I have observed several examples to the contrary. Thus, in a child, aged 8 months,¶ under my care, with a history of wasting since measles some weeks previous, œdema was extensive, and the urine albuminous but free from tube-casts. At the post-mortem examination the lungs were dropsical, with slight patches of broncho-pneumonia, the liver was a little fatty, the heart healthy.

* 'Gaz. Med. de Nantes,' 1904, p. 1033.

† 'Rev. Fr. de Méd. et de Chir.,' 1904, p. 1019.

‡ 'Gaz. Hebd. des Sc. Med. de Bordeaux,' 1905, p. 532.

§ 'Deutsche Med. Wochenschr.,' 1905, p. 1464.

‖ 'Gazette de Hôpitaux,' December the 28th, 1905, p. 1760.

¶ "A Fatal Case of Œdema associated with Albuminuria in an Infant Aged Eight Months," 'Reports of The Society for the Study of Disease in Children,' vol. iv, p. 132.

To the naked eye the kidneys looked healthy, and this was confirmed microscopically. The quantity of urine passed was small—some 4 or 5 oz. in the twenty-four hours. The urea averaged 4 gr. per ounce. Thus there was renal inadequacy in this case, but no nephritis. Renal incompetency with a scant secretion of urine is common in this condition.

Hutinel attributed the dropsy to retention of chlorides in the system, and his theoretical views have been confirmed experimentally by Heubner on an infant, aged 6 weeks. Each time chloride or phosphate of sodium was given the urine diminished and the body-weight increased. When the salines were omitted the flow of urine was augmented and the body-weight diminished. Examination proved that oliguria was invariably associated with retention of chlorides. At the autopsy the kidneys were found to be perfectly healthy. Two other cases reported by Meyer confirm Heubner's experiments.

In two recent cases under my care, one post-erysipelatous, the other ileo-colic, the chlorides were diminished. The urines were free from albumin, and in the latter case the œdema was extensive. In both instances there was renal insufficiency.

P. A. Potter* states that the œdema can be cured by increasing the percentage of proteid in the milk. He recommends that the diarrhœa should be disregarded, the attention being directed to the proteids.

Rocaz† having found traces of albumin in two of his cases inquires whether this inadequacy is not due to true kidney lesions, and whether they do not exist even where there is no albuminuria. This is, of course, quite possible, because it has been frequently proved that nephritis can be present without either albuminuria or tube casts or renal *debris*.

While allowing, then, that œdema in these cases *may* denote nephritis even in the absence of albumin and tube

* 'Pediatrics,' 1904, vol. xvi, p. 129.

† *Loc. cit.*

casts, it, on the other hand, must be recognised that the presence of albumin in the urine does not prove that the kidneys are inflamed. If there be neither albumin nor tube casts it is improbable that the kidneys are diseased no matter how extensive the œdema.

Œdema of the new-born takes origin in a variety of complaints. Thus it may be a sequel of erysipelas, and often is so; it may denote a failing heart, atelectasis and engorgement of the venous system in the weakly, the premature, and in those who have been brought into the world under unfavourable auspices; it may be an example of family trophœdema; or it may indicate nephritis.

In older infants, in addition to the causes mentioned, it may be associated with tuberculous and simple lung disorders, with leukæmia and pseudo-leukæmia, or be due to nephritis.

Referring to one's own clinical experiences and that of our countrymen there can be no doubt but that cases of nephritis do occur from time to time in the youngest infants, and with the usual objective signs of that complaint. It is also probable that in some the disease starts in intra-uterine life.

My first acquaintance with nephritis in the infant was made as long ago as November, 1889, in a syphilitic baby, aged 5 weeks,* who, while under treatment, developed extensive dropsy. The urine contained albumin and hyaline, epithelial, and blood casts. The infant was treated with mercury, but without benefit to the kidney trouble. The kidneys at the post-mortem *appeared healthy to the naked eye*, but the microscope showed obvious fibrous and catarrhal changes. About this time I also met with another example of pronounced dropsy in a syphilitic infant, aged 6 months. A catheter was passed but the bladder was empty, and the infant was not brought again. In relation to these observations it is not uninteresting to read that Henoch† could never establish the connection of

* 'Syphilis of Children,' pp. 56, 57, 1901.

† 'Lectures on Children's Diseases,' vol. ii, p. 170.

infantile renal disease with syphilis, though he advises that this should be borne in mind in view of a case successfully treated by mercury by Bradley.

Cassel * has studied the kidney changes in a number of cases of congenital syphilis, but of thirty-one syphilitic infants, six of them showed albumin in the urine and formed elements. Definite interstitial changes were found in the kidneys of five cases who had survived for some time after birth, in the shape of various sized cellular groups of infiltration in the cortex, and cystic degeneration of the glomeruli. In all there was proliferation of the adventitia of the interlobular arteries, consisting of polynuclear, mononuclear, eosinophile, and plasma cells. The process had in no case proceeded to the formation of connective tissue. Of seven specimens taken from syphilitic fœtuses, six showed inflammatory interstitial cellular proliferation, along with peri-adventitial infiltration. The interstitial changes displayed no features by which they could be distinguished from any other inflammatory process, but the peri-adventitial changes he regarded as of strong diagnostic import. Like Stroebe and Hecker, Cassel found evidences of retarded development in the kidneys of syphilitic fœtuses.

Both Coupland † and Stroebe ‡ have recorded cases of acute interstitial nephritis in congenital syphilis, and in both of these cases *the naked-eye appearances were normal.*

Speiss also has collected thirty-four post-mortems of congenital syphilis, and of these ten had renal disease.

G. A. Sutherland and Thompson Walker § recorded an example of nephritis in a sixteen months old syphilitic infant. On one occasion, when there was retention of urine, the water was drawn off by catheter and found to contain a small amount of albumin.

Post-mortem.—The arteries at the base of the brain

* "Nephritis in Hereditary Syphilis," 'Berl. klin. Woch.,' 1904, No. 2.

† 'Path. Soc. Trans. Lond.,' vol. xxvii, 1876, p. 303.

‡ 'Centralb. f. Allg. Path.,' vol. ii, 1891, p. 1009.

§ 'Reports of The Society for the Study of Disease in Children,' vol. ii, p. 134.

showed syphilitic inflammation. The cortex of the kidneys was densely infiltrated with round cells. The epithelium of the tubules was granular in appearance, and in many the lumen was filled with cysts of a homogeneous material or with masses of round cells. In the patches of dense infiltration the epithelium was shed and blocked the lumens of the tubules.

They also recorded another case of congenital syphilis that was examined in the post-mortem room—a girl, aged 8 months. The microscopical appearances of the kidneys were similar to those found in their first case, but the tubules were unaffected.

It is thus abundantly clear that congenital syphilis is responsible for at least some of the cases of infantile nephritis.

Owing to the trouble experienced in the collection of infantile urines, routine examinations of the water are not customary. Further, as extensive kidney disease may exist without dropsy, cases of infantile nephritis are very apt to be overlooked clinically. Not only is nephritis liable to escape detection at the bedside, but the kidneys of such patients readily pass muster in the post-mortem room, for it is a peculiarity of infantile nephritis kidneys—whether of syphilitic or simple origin—that they frequently *appear to the naked eye to be healthy*, even when they are extensively diseased. To these disadvantages must be attributed the paucity of the literature, not to the lack of material.

Though some cases of infantile nephritis are undoubtedly syphilitic, there are others that are certainly not so, and others that must be looked upon as doubtful. Thus Henoch* relates the case of an infant, aged 5 weeks, who was dropsical. A catheter was passed with barren results. At the post-mortem examination there was diffuse nephritis associated with serous effusions into the pleura, pericardium, and peritoneum.

Ashby† records the case of an infant, aged 4 weeks,

* 'Lectures on Children's Diseases,' vol. ii, p. 170.

† "A Case of Nephritis in a Newly-born Infant," 'Reports of The Society for the Study of Disease in Children,' vol. i, p. 129.

which became dropsical the day following its birth, and remained anasarcous to the day of its death, and finally died in convulsions. The kidneys were pale and showed but little difference between the cortex and the medulla. Microscopically there were extensive epithelial and fibroid changes, and the small arteries appeared thickened. There was no evidence of syphilis, although he thought that suggestion worthy of consideration, but to him it appeared to be of the "exact type of scarlatinal nephritis."

In the case of a syphilitic infant, aged 5 months, under my care,* the child was dropsical, and the urine albuminous and scanty. It contained hyaline, epithelial, and granular casts, and red blood discs. He was under observation for a month, and was treated with mercury. He finally sank and died. *To the naked eye the kidneys appeared healthy,* but microscopically there was patchy catarrhal nephritis. The small arteries in the neighbourhood of the glomeruli were thickened and their lumens diminished. The view I then held was that the nephritis was of syphilitic origin, though it is open to discussion whether the changes were of a syphilitic nature. The arterial changes were similar to those found in Ashby's case. There was no doubt, however, as to the child being syphilitic.

I have also had another example of nephritis in an infant, aged 5 weeks,† who was admitted into hospital under my care with a history of diarrhœa and vomiting. The infant was dropsical, and there was some free fluid in the abdominal cavity. The urine was albuminous; a microscopical examination was not made. He died five days afterwards. At the autopsy there was found some broncho-pneumonia and collapse. There was clear fluid in the abdomen with adhesions between the liver and the abdominal wall. The spleen was twice its natural size.

* "A Case of Syphilitic Nephritis in an Infant, aged 5 months," Reports of The Society for the Study of Disease in Children,' vol. iii, p. 286.

† "Interstitial Nephritis and Cirrhosis of the Supra-renal Capsules in an Infant Five Weeks Old," 'Reports of The Society for the Study of Disease in Children,' vol. vi, p. 258; 'Lancet,' November the 3rd, 1906.

The kidneys *were normal to the naked eye*. Microscopically there were interstitial changes in them, and the tubular epithelium was shed and necrotic. There also appeared to be some thickening of the small arteries, a feature observed in the other cases I have related. The suprarenal capsules were enlarged, and microscopically it was thought there were inflammatory changes. Section of the right capsule showed what appeared to be an old hæmorrhage. There was no *history* of syphilis, and no physical signs of that complaint apart from splenomegaly.

The last illustration I give is that of a boy, aged 3 months, whom I exhibited to the Society in November, last year, as an example of syphilitic nephritis (No. 22, p. 48, in this volume of the 'Reports') and who I first saw on the 6th of that month. Obvious signs of kidney disease commenced when he was 2½ months old, and were preceded by "snuffles," which occurred somewhat earlier. Over the backs of the thighs and the calves was cutaneous staining as of a former eruption. The urine was markedly albuminous and contained coarse and fine granular casts, hyaline casts with kidney cells therein, kidney epithelial cells, pus corpuscles, and a few red blood-cells. The fundus oculi was normal. Four days later he developed enlarged glands over the mastoids. The œdema did not abate, and subsequently the abdomen was found to be full of fluid and very tender to the touch. He died on the 21st. At the autopsy the legs and arms were very œdematous, and the abdomen was much distended. On section the abdomen was full of purulent fluid (pneumococcal), and there was extensive peritonitis. There were flakes of lymph on the liver and spleen. The small intestines showed enteritis, and the large intestines displayed patches of congestion and an adherent appendix. The heart, pericardium, and lungs were normal. The brain was slightly congested. *To the naked eye the kidneys appeared healthy,* but microscopically here and there were areas with marked interstitial changes of all degrees, from a simple round-celled infiltration to a decided fibrosis. Some of the arteries near the glomeruli

were thickened, a change which was confined to the external and middle coats. But some of the finest arterial ramifications in the interstitial tissue appeared to be made up of an over-nucleated material which encroached upon their lumens. The glomerular capsules displayed a decided fibrosis here and there. In addition, many of the glomeruli had undergone more or less advanced hyaline degeneration with a corresponding paucity of nuclei. The glomerular nuclei were otherwise normal in amount, and over-nucleation was exceptional. There was distinct evidence of catarrhal nephritis, and the tubules were in places dilated.

This combination of parenchymatous and interstitial inflammation in infantile nephritis is apparently not unusual. It occurred in three of my cases, in Ashby's patient, in Sutherland and Thompson Walker's case, and three out of seven of Fry and Martin's post-mortems had the combined lesions.

But the cases which I have been able to report to the Society are, in my judgment, examples of congenital syphilis of the kidney.

The thickened renal arteries which occurred in my patients are, I consider, a syphilitic manifestation, and are not suggestive merely of a chronic nephritis.

I have not met with examples of infantile nephritis which I could ascribe to other causes.

Had it not been for a study of the literature, I should have felt inclined to attribute interstitial nephritis, and the associated interstitial and parenchymatous nephritis in these young infants which I was the first to call attention to, to the syphilitic poison.

But the cases of Fry and Martin apparently prove that interstitial changes and combined interstitial and parenchymatous inflammation can arise from other toxines. If that be so, another explanation than the syphilitic one is afforded of the origin of the cirrhotic kidney. The possibility also of the seeds of the cirrhotic kidney being sown in infant life must not be overlooked, as also of its origin in intestinal and other toxines.

In conclusion, it is abundantly suggestive that nephritis in infants is a much less rare condition than is commonly supposed to be the case, and that there is a large field for research work in this department of children's diseases.

(*Read at the Provincial Meeting at Bedford, June the* 15*th,* 1907.)

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